The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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MR. JAMES H. CROFTS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER.
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
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A Daily Price List, issued at 5 P.M., giving latest Quotations up to close of Market. Also, on the 1st of every month a List of all Securities currently dealt in upon the Mining and Stock Exchanges, with latest prices, current dividends, rate of interest yielded at market price, &c., and every Friday a general List containing closing prices of the week.

MINES INSPECTED.

BANKERS: CITY BANK, LONDON; SOUTH CORNWALL BANK, ST. AUSTELL.

SPECIAL DEALINGS in the following, or part:—

25 Bettws-y-Coed.	75 Javali, 8s.	10 Roman Grav., £7.
50 Chapel House, £3 1 3	20 Leadhills, £2¼.	40 Rookhope, 11s.
35 Chontales, 11s.	50 Llanrwst.	10 Richmond, £9½.
50 Colorado, £3.	25 Morfa Du, 15s.	9 Thorp's Gawber Col., offer wanted.
10 D'Eresby Consols.	30 Pant-y-Mwyn, £3¼.	
20 East Van, £3⅜.	50 Penstruthal, 4s. 3d.	25 Van Consols, 10s.
25 Flagstaff, 11s. 6d.	25 Pestarena, 4s. 9d.	50 W. Tankerville, 2s. 6d
25 Hultafall, £3¼.	100 Parys Moun., 5s. 3d.	

*** SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.

FOREIGN BONDS.—SPECIAL BUSINESS. Fortnightly Accounts opened on receipt of the usual cover.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

RAILWAYS—HOME AND FOREIGN.—SPECIAL BUSINESS. Fortnightly Accounts opened on receipt of the usual cover.
JAMES H CROFTS, 1, FINCH LANE, LONDON.

MISCELLANEOUS AND TRAMWAY SHARES.—SPECIAL BUSINESS in—

MISCELLNAEOUS.	Royal Aquar. (Westm.)	North Metropolitan
Alhambra Palace.	Lawes Chemical.	Tramways.
Brighton Aquarium.	Globe Telegraph.	Tramway Union.

BUSINESS TRANSACTED in all MISCELLANEOUS SHARES (of whatever description) having LONDON or COUNTRY MARKET VALUES.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.
Bankers: City Bank, London; South Cornwall Bank, St. Austell.
ESTABLISHED 1842.

MR. W. H. BUMPUS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER,
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60 Bodidris, 22s. 6d.	15 Frontino, £2¾.	10 Pateley Bridge, £4⅜.
40 Blue Tent, £2¼.	10 Grogwinion.	70 Port Phillip, 11s. 6d.
25 Colorado, £2 15s. 6d.	5 Great Laxey, £17¼.	50 Pestarena, 5s.
100 Chontales, 12s.	100 Glenroy, 11s.	80 Penstruthal, 4s. 6d.
30 Cambrian.	50 Hultafall.	15 Roman Grav., £7¼.
200 Cedar Creek, 4s. 6d.	30 Javali, 8s. 6d.	100 Rookhope, 13s.
50 Don Pedro.	25 Kapanga, 24s.	20 Richmond, £9⅞.
20 Devon Consols, 28s 9d	40 Last Chance, 16s.	5 So. Condurrow, £10¼.
50 Derwent, 20s.	20 Leadhills, £2 6s. 3d.	150 Tyn-y-Fron.
3 Dolcoath.	30 Llanrwst, 33s.	15 Tankerville, £4.
150 Exchequer, 6s. 6d.	50 Marke Valley, 16s.	10 Van, £17¾.
15 Eberhardt, £4½.	25 New Quebrada, 31s.	50 W. Godolphin, 5s.
20 East Van, £2 10s. 6d.	100 Pandora, 10s. 6d.	20 Wh. Grenville, £2.

SPECIAL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.

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30 Almada, 6s. 3d.	50 Flagstaff, 9s.	15 Plumas, £2 16s.
25 Birdseye, 13s.	20 Frontino, £2 6s. 6d.	50 Port Phillip, 11s. 3d.
25 Blue Tent, £2¾.	35 I.X.L.	200 Pestarena, 5s.
75 Chontales, 11s. 6d.	50 Javali, 8s.	20 Richmond, £9⅞.
20 Colorado, £2 15s. 6d.	70 Kapanga, 24s. 6d.	60 Rossa Grande, 2s. 6d.
50 Don Pedro, 11s.	25 Last Chance, 16s.	25 Sierra Buttes, £1¾.
15 Eberhardt, £4½.	40 London & Californian.	30 Santa Barbara.
30 Exchequer, 7s.	20 Malpaso, £¾.	15 United Mexican.

Bankers: The National Provincial Bank of England.

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Notice to Investors and Speculators.
Mr. BUDGE has SPECIAL DEALINGS in—

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150 Aberduanant.	200 Gold Run, 5s. 6d.	100 Pestarena, 4s. 9d.
60 Australian.	50 Gen. Mining, £3 5s 9d	60 Pandora.
125 Bodidris.	20 Grogwinion, £2 18s 6d	50 Penhalls, 16s. 6d.
45 Blaen Caelan, £3¼.	45 Great Holway.	120 Port Phillip, 11s.
40 Cakemore, £3½.	50 Hultafall, £3.	25 Richmond.
70 Colorado, £2¾.	30 Hornachos, £12⅞.	20 Red Rock, 2½.
35 Caron, £2 13s. 3d.	200 Credit A, 20s.	30 Roman Gravels.
50 Chapel House, £3 2s 3	50 Bombay Gas, £5½.	200 Rossa Grande, 2s. 3d.
100 Cambrian.	20 Rio de Janeiro Gas, £21⅞.	55 Rookhope.
85 Chicago, 20s. 6d.	150 I.X.L., 4s.	20 St. Harmon.
120 Don Pedro, 10s. 6d.	65 Llanrwst.	60 Scottish Aus., £1 18 6
40 Devonport and Tiverton Brewery.	63 Ladywell Pref., 12s.	20 South Frances, £5.
50 Derwent.	3 Lisburne.	125 Tyn-y-Fron.
10s Exchequer, 7s.	35 Monydd Gorddu.	20 Tankerville.
90 East Chiverton.	50 Marke Valley.	40 Wheal Uny.
20 East Pool.	10 Minera, £8½.	15 W. Wye Valley, £2¼.
	50 North Hendre.	20 Wye Valley, £2¾.

BUYERS or SELLERS of any of the above, or holders of any Stocks or Shares not readily marketable, will do well to apply to Mr. BUDGE.
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D'Eresby Mountain.	South Frances.	Don Pedro, 12s.
Dalcoath, £23.	Tankerville, £3⅞.	Eberhardt, £4¼.
East Van, £2⅞.	Van, £17½.	Exchequer.
Glenroy, 10s. 6d.	West Chiverton, £4.	Flagstaff, 10s. 6d.
Grogwinion, 42s. 6d.		Frontino, 47s.
Great Laxey, £16¾.	Commercial Gas.	Hultafall, £3 2s. 6d.
Leadhills, 41s. 6d.	Gas Light and Coke.	Javali, 7s. 9d.
Llanrwst, 36s.	Imperial Continental.	Last Chance, 16s. 6d.
Pandora, 11s. 6d.	National Discount.	Kapanga, 27s.
Penstruthal, 4s. 3d.	Phœnix.	Port Phillip, 11s. 6d.
Parys Mountain, 5s.	Surrey Consumers.	Richmond, £9¾.
Pateley Bridge.	Telegraphic Construct.	Santa Barbara, 26s.
Roman Grav., £6 18s.	Standard Discount.	South Aurora.
Rookhope, 12s. 6d.		

BANKERS: LONDON AND WESTMINSTER.

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40 Don Pedro	30 Lawes' Chemical.	30 Royal Aquarium.

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Closing Prices forwarded to clients daily free of charge on application.
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10 Assheton.	20 Devon Great Consols.	30 Morfa Du.
75 Aberdaunant, 5s.	10 East Van, £3¼.	20 Pandora, 11s. 3d.
15 Birdseye, 16s. 6d.	10 Eberhardt, £4½.	20 Pant-y-Mwyn, £5.
10 Cambrian (off. wntd.)	20 Exchequer.	10 Tankerville, £4¼.
20 Don Pedro, 12s.	10 Frontino, £2½.	5 Van, £18.
	20 Flagstaff, 9s.	

SPECIAL BUSINESS in Aberdaunant, Minera, and Pant-y-Mwyn.
Letters and Telegrams promptly attended to.
BANKERS—LONDON JOINT-STOCK BANK.

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The following are the latest prices at which business could be done. Where the difference between the buying and selling price is wide transactions may be effected at an intermediate price:—
N.B.—Shares with no price affixed can be dealt in by special arrangement. Terms on application.

	Buyers.	Sellers.		Buyers.	Sellers.
Aberdaunant	4s.	6s.	Leadhills	2	2¼
Cambrian	—	—	Llanrwst	—	—
Colorado	2½	2¾	Mellanear	£ 3¾	£4
Chontales	10s.	11s. 6d.	New Quebrada	1½	1¾
Clementina	1	1¼	New Zealand Kapanga	1⅜	1½
Denbighshire	—	—	Pant-y-Mwyn	—	—
D'Eresby Consols	—	—	Parys Mountain	5s. 6d.	6s. 6d.
Devon Great Consols	1¼	1½	Pateley Bridge	3½	3¾
Don Pedro	10s.	11s.	Penstruthal	3s. 6d.	4s. 6d.
Eberhardt	3¾	4¼	Plynlimmon	1s. 6d.	2s. 6d.
East Caradon	6s.	8s.	Richmond	9⅝	9⅞
East Van	2½	2¾	Roman Gravels	7	7½
Exchequer	5s.	6s.	Rookhope	10s.	12s. 6d
Flagstaff	7s.	9s.	South Condurrow	9	10
Frontino	2	2½	South Frances	4¼	4¾
Glenroy	10s.	12s. 6d.	Tankerville	3¾	4
Glyn	11s.	12s.	Tincroft	5	6
Grogwinion	2	2¼	Van	17	18
Great Holway	—	—	West Chiverton	3½	4
Great Laxey	16½	17½	West Wye Valley	2	2½
Hultafall	3	3½	W. Grenville	2	2¾
Last Chance	14s. 6d.	17s.	Wye Valley	1¾	1½

An improvement has occurred in Leadhills.

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER,
29, BISHOPSGATE STREET, LONDON, E.C. (Established 22 Years),
can sell the following SHARES, at prices annexed:—

25 Birdseye, 17s.	25 Great Holway.	40 Parys Mountain, 5s 6d
20 Blaen Caelan, £4.	25 Hultafall, £3 2s. 6d.	10 Pateley Bdge., £4¼.
40 Cambrian, £1 15s.	40 Last Chance, 15s.	50 Penstruthal, 4s. 6d.
30 Colorado, £2¾.	20 Leadhills, £2 5s.	10 Richmond, £9 15s.
20 Court Grange, 17s. 6d	20 Javali, 8s.	40 Rookhope, 13s. 9d.
3 Cape Copper, £30.	20 Llanrwst.	15 Roman Grav., £7 2s 6
20 Cakemore Colliery.	25 Ladywell (ful. p), 11s3	15 Tankerville, £4 1s.
30 Don Pedro, 11s. 9d.	40 Morfa Du, 14s.	60 Tyn-y-Fron.
100 East Van, £2⅞.	25 N. Zea. Kap., £1 2s 6	5 Van, £17¼.
15 Eberhardt, £4 1s.	20 N. Quebrada, £1 10s.	5 W. Chiverton, £4¼.
150 Exchequer, 6s. 3d.	15 Pant-y-Mwyn, £5.	25 West Pateley Bridge, £1 11s. 6d.
25 Frontino, £2¼.	10 Pennant.	
40 Flagstaff, 8s. 3d.	100 Pestarena, 5s. 3d.	25 Yorke Peninsula, 5s.
15 Gorsedd & Mer. £4¼.	100 Port Phillip, 11s. 6d.	25 ditto pref., 16s. 9d.

SPECIAL BUSINESS in 50 Ligno Mineral Wood Paving Company, £5 shares, fully paid.
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Price Sixpence.

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Dividends 4 to 6 and 8 per cent. per annum upon outlay.
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MESSRS. JONES AND HOUSTON, 25, CROSBY HALL CHAMBERS, LONDON, E.C., can SELL the following SHARES at affixed prices:—

BRITISH MINES.		
50 Aberduanant, 6s.	Great Laxey, £17½.	5 So. Wh. Frances, £4⅞
30 Aberllyn, £12.	2 Grogwinion, £2¼.	30 Tankerville, £3 17s 6
100 Bodidris, £1 7s. 6d.	150 North Laxey, 2s.	5 Van, £17 17s. 6d.
5 Caru Brea, £30.	30 Parys Mount., 5s. 6d.	10 W. Chiverton, £4 10s.
20 Devon Con., £1 15s.	100 Pant-y-Mwyn, £5.*	10 W. Wye Val., £2 5s.
5 Dolcoath, £23.	10 Pateley Bridge, £4½.	5 Wheal Peevor, £6.
East Van, £3⅜.	200 Penstruthal, 5s. 6d.	15 W. Tankerville, 3s. 9d
	35 Rookhope, 13s. 3d.	
FOREIGN MINES.		
30 Almada, 7s. 6d.	100 Don Pedro, 13s.*	5 New Quebrada, £1¼.
20 Argentine, 12s. 6d.	10 Eberhardt, £4½.	40 New Zealand Kapanga
50 Alamillos, £1¾.	30 Exchequer Gold, ¾.	30 Pestarena.*
10 Australian, £1½.	50 Flagstaff, 9s.	50 Port Phillip.
5 Cape Copper, £30, x.d	20 Frontino, £2¼.	10 Richmond Consolid.
100 Chicago Silver, £1.	30 I.X.L. Gold, 4s. 3d.	2 St. John del Rey.
35 Chontales, 12s.	50 Last Chance, 13s. 9d.	30 United Mexican.
Colorado Uni., £2⅞.*	10 Linares, £4.	

Pant-y-Mwyn Lead Mining Shares are recommended either for a great rise or to hold for dividends, which are increasing.
* Shares marked thus will probably have an important rise shortly.
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Special business in these shares at close prices. Buyers and sellers should communicate with us.

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FOR SALE, lowest:—50 Rossa Grande, 1s. 9d; 100 (not less than 50) Yorke Peninsula, 4s.; 100 Exchequer, 6s.; 10 Llanrwst, 27s. 6d.; 4 Chontales, 10s.; 5 West Chiverton, £4; 100 South Roman Gravels, 2s. 6d.; 5 Leadhills, £2; 20 St. Harmon, £2; 20 Cambrian, £2; 20 East Van, £2 17s. 6d. All fully paid, limited, each net. 5 Grenville, £2 each, call paid.
Address, "Z. Z.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

FOR SALE (the whole or part):—

25 Tankerville, £4.	30 East Van, £3¼.	50 Pandora, 12s.
50 Hornachos, £13½.	50 Morfa Du, 14s.	10 Van, £17½.
100 Hultafall, £3.	30 Gorsedd & Mer., £4.	

Special Business, as Buyer or Seller, at fair margins in—

10 to 300 Pant-y-Mwyn.	50 to 300 Bettws-y-Coed.	10 to 100 Temple.
	50 to 500 Tyn-y-Fron.	

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Lectures on Practical Mining in Germany.

CLAUSTHAL MINING SCHOOL NOTES.*—No. XCI.

BY J. CLARK JEFFERSON, A.R.S.M., WH. SC.,
Mining Engineer, Wakefield.
(Formerly Student at the Royal Bergakademie, Clausthal).
[The Author reserves the right of reproduction.]

SECTION V.

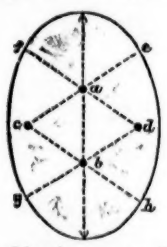
The strength of the arch should be regulated according to the pressure on the roof. This pressure will depend on the width of the lode, the height of the attle packing above the roof, and the dip of the lode. Where the dip is vertical the pressure on the arch will be equal to the weight of the attle packing above it, minus the frictional resistance of the attle against the sides of the lode. In practice, however, it is simpler and better to disregard the frictional resistance, and in calculation to consider (in the case of a vertical lode) that the pressure on the arch is simply the weight of the attle resting upon it.

In the Saxon mines the thickness of the arch in millimetres is, according to Lottner, assumed to be equal to the square root of the span of the arch in metres, multiplied by 0·32 in ordinary cases, and by 0·35 in cases of great pressure. The height of the attle packing (equal to the distance between two levels) is taken at about 45 yds. An arch of 2 ft. in width, with the usual rise, should to support the above height of attle packing be taken at 11 ins. In most mines the lode is inclined so that not the whole weight, but only the component of the weight in the direction of the dip of the lode, falls upon the roof.

Lodes in which the walls are strong may simply require an arch in the roof. It may happen, however, that one of the walls of the lode is not reliable; in this case recourse is often had to the building of the foot of the arch in the country rock, so that the arch not only forms the roof but one of the sides (generally the lying side) as well. This is often resorted to when the whole of the material of the lode has been removed; in some cases the foot of the wall being carried so far into the country rock that a ledge is left between it and the side of the lode, in which a gutter can be cut to catch and conduct the water away, preventing its further descent into the mine. Such an arrangement is the more advantageous where the substance of the lode is porous. In cases where the adit is driven through country rock to strike a lode, or even in the case of stratified deposits, the level may simply require arching, being driven in a rock which is comparatively solid and compact, the roof being softer and friable requires arching. In such a case the arch will be best footed against the upper part of the hard bed. Where this strong bed is not sufficiently thick to allow of the level being driven entirely in it, it will be found advantageous to continue the arch downwards on both sides, to form a complete semicircular roof. Where the strong bed is comparatively thin, so that the greater part of the level must be driven in the looser ground, the arch must form the greater part of a circle or ellipse, the feet being bedded on the harder ground.

The shape of the walling of a level is dependant on the direction and amount of the pressure. Where the pressure comes only on the roof and one side, only those portions of the level require to be walled, the radius of the roof arching being much less than that of the side arch. Where the pressure acts not only on the roof but also on both sides, then both sides of the wall will require arching; and where an equal pressure acts on roof, sides, and floor, the level will be completely enclosed with walling, the curves of the roof and floor arches being generally less than those of the sides, which are usually of the same radius. It is not often, however, that the curve of the roof and floor are the same; where they are the level may either have an elliptical section, or be formed of circle curves.

When the curves of an arch are portions of circles the radii at the junction of the two curves must fall together—*i.e.*, the line joining the two centres when prolonged to the point on the curves at which the two curves join coincides with the two radii, or is at right angles to the tangent of the curve of the arch at this point. The accompanying figure shows a very usual combination of circular curves in place of an elipse: *a* and *b* are the centres of the roof and floor arches respectively; and *d* and *c* of the side arches; the points *e*, *f*, *g*, *h* are the points in which the curves join. As a rule the side radii—*c e* or *c h*, and *d f* or *d g* respectively, are of the same length; the radii of the roof (*a c* or *a f*) and floor (*b g* or *b h*) are not always of the same length. Where the dimensions of the level are required to be small it is best to drop the distinction between arch and invert, and to use shapes which would result from making in one case the radius *a c* larger and in the other case less than the radius *b h*. The arching is usually formed from one to two bricks thick, according to the nature of the pressure. It will be the safest in case of great pressure to use bricks which have been moulded wedge-shape, instead of making the joints wider at the back than on the inner side, which must be done where the bricks are of equal thickness.



When the stratum in which a level is driven is such that the walling of the arch would be liable to sink into it, either owing to percolation of water, and consequent softening of the stratum, or to the friable and broken nature of the ground, it will be necessary to have the foot of the wall properly supported. The simplest case of thus supporting the wall is by means of long flat beams of timber laid lengthways beneath the foot of the wall. Should the floor be so bad that there is any likelihood of one side sinking more than the other, the footing boards are laid close together crossways in the level. If longitudinal planks are laid over the cross planks at the ends of the latter, and the side walls then built on these, a very strong footing will be obtained. Wood, however, is liable to rot, and hence it is better to use large flat stones, where suitable ones can be obtained for the purpose. Another method of supporting the foot of the side walls is to line the floor of the level with an inverted arch, and to build the side walls upon the ends. This method of forming the floor of the level with an inverted brick arch is often resorted to where the ground though strong enough is still so porous that it allows the water to pass through into underlying stopes or levels. In most cases where it is necessary thus to support the side walls with inverted arches it will be found that the ground is such that the side pressure would be too great for the stability of plane vertical walls. In such a case it is best to line the whole of the level with an elliptical walling.

Where the floor of a level is thus lined it is evident that some provision must be made for travelling purposes. In discussing the timbering of levels we have left this portion of the subject out of consideration; we propose, however, to consider it now, especially as many of the arrangements are common both to levels which are timbered or walled.

In most cases the travelling road for men and boys has to serve at the same time as the road for the conveyance of the minerals; and in such a case the arrangements will be planned principally with a view to the latter. Besides this it may also be necessary to lay the road some short distance above the floor of a level, especially where the floor is formed by an inverted arch lining, along which the water is drained. In very rare cases the roadway when raised above the floor of the level requires to be made air-tight, the division between the two acting as a horizontal bratticing to carry the air close up to the face of the drift, &c.

The simplest mode of laying a travelling path along the floor of a level is to lay flat planks, 12 ins. to 13 ins. in width, on the floor, with the ends laid either flush or overlapping. The ore or minerals are then wheeled over these in wheelbarrows to their destination. Such an arrangement may do temporarily, but will be liable to be covered or imbedded in dirt and dust. To prevent this readily occurring, and to give the boards a better bedding than on the uneven floor of the level, sleepers are laid on the ground and the planks upon these. The sleepers for this purpose are generally formed of half round wood, having the rounded end turned upwards. These only raise the planks from 4 ins. to 5 ins. above the floor of the level, and consequently leave them still liable to be buried in dirt. When the level is used as an adit, along the bottom of which the water drains, the sleepers must be laid some distance above the level of the water. The sleepers are inserted in position exactly in the same manner that we have described for inserting stempels. Care must be taken, however, to set out carefully the position of the stempel notches, which must be all in the same line. This is generally done by means of a spirit level, a vertical quadrant, and a long line. The sleepers which are used in this case are usually of round wood, with the upper side hacked or planed to a flat face; occasionally the sleepers are sawn four sided; the first method is to be advised, since only one flat face is required, and the wood is not weakened so much. Whilst the upper surfaces of the sleepers may rise and dip in the direction of the level each sleeper must lie perfectly horizontal for itself, so that the weight has not a tendency to slide down to one side of the level. To save expense in timber, stronger and weaker sleepers are fixed alternately, the upper flat surfaces of which must necessarily lie in the same plane. On the sleepers the flat planks are laid, in such a manner that each is supported (nailed on) at the ends on two principal sleepers, and rests between on two auxiliary and a third principal sleeper. The planks are not usually nailed to the sleepers, except at the ends. Where besides foot travelling, or in place of the conveyance of the minerals in wheelbarrows, a tramway has to be laid, the rails are usually laid on the sleepers, one on each side parallel to the plank footway. The distance of the sleepers apart usually varies between 3 ft. and 4 ft.

Instead of supporting the sleepers directly on the sides they are sometimes notched into the legs of the door sets supporting the level. This has the disadvantage of throwing the weight of the minerals, &c., being conveyed on to the timbering. In another arrangement the sleepers are notched on inclined struts, which are footed in the bottom of the level, and have their upper ends notched into the legs of the door sets.

When the sleepers have to be laid in levels which are completely lined with brickwork, it is usual to take this into account when building in the brick walls. Provision for the sleepers may be made in two ways—either by leaving holes or notches in the brickwork in which the ends of the stemples can be inserted, or by building projecting ledges (ledges projecting inwards, and having a flat horizontal upper surfaces). The first arrangement has the disadvantage that the wall is weakened, and where heavy loads are carried the vibrations may still further affect the wall.

Where it is wished to have the floor air tight the planks are laid close together, and all the joints are carefully stopped.

Wooden stempels, or supports, are invariably liable to rot with time, and hence where the level has to be used for some time as a road for the conveyance of mineral it is not unusual to replace the stempels by narrow brick arches placed every 5 or 6 ft. over which the planks are laid, the top of the arch being then finished horizontally. More rarely the bottom of the level is covered in by one long continuous arching, which has the chief disadvantage that access to the under part of the level to clear out the mud and silt from the bottom of the water channel is rendered more difficult and inconvenient.

The following examples of the walling of levels are given by Lottner: In the Saarbrücken Collieries where sandstone is used for the walling of levels, the side walls are 18 to 24 in., the arches 15 to 18, and even 20 in. thick. The Saar adit level is lined with a continuous elliptical arch 18 in. in thickness. At the brown coal mines, Gluckauf, near Völpke, where a continuous elliptical arching has been executed, the level is 60 in. in height, 40 in. wide, and formed of wedged formed bricks 10 in. long and 6 in. wide, and from 1¾ in. to 2½ in. thick in the roof or floor, and 2¼ to 2½ in. thick at the sides. The walling is one brick (6 in.) thick. At the brown coal colliery George, near Aschersleben, a level was driven in the coal by means of spilling, elliptical in section 80 in. in height, 50 in. wide, and 5 in. thick. The bricks used for the roof and floor were in this case also made wedged shape. At the Havelsberg adit level the lining was elliptical in section, except the floor, which was made with a circular arch. For a height of 17 in. sandstone slabs and blocks were used, 10 in. thick, the rest of the arch being formed of bricks 10 in. by 6 in. by 2¼ in. Between the sandstone and the brick, especially cut blocks of sandstone were inserted to afford a better footing for the brickwork. As a rule the arches are made a brick and a half thick, this being the most suitable thickness for tying the brickwork together.

* Being Notes on a Course of Lectures on Mining, delivered by Herr Bergrath Dr. Von Groddeck, Director of the Royal Bergakademie, Clausthal, The Harz, North Germany.

SOUTH STAFFORDSHIRE AND EAST WORCESTERSHIRE INSTITUTE OF MINING ENGINEERS.

The monthly meeting of members was held, on Monday, at the Geological Museum, Dudley—Mr. Wm. North (President) in the chair. There were present—Messrs. Henry Johnson (vice-president), John Field, Wm. J. Davies, Thos. Parton, F.G.S., Wm. Farnworth, Joseph Cole, Richard Latham, Thomas Latham, Daniel Rogers, Robert Calderwood, Joseph Lawley, Josiah Spruce, F. J. Jones, Fred. Hughes, Isaac Meacham, jun., Daniel Whale, Benj. Callear, W. H. Whitehouse, J. F. Addenbrooke, John Hughes, James Harris, David Edwards, Walter Bagshaw, C. E. Cole, W. H. Glennie, Thos. Vaughan, Henry Johnson, jun., Jonah Davies, James Ritson, George Taylor, George Spruce, F. W. North, W. J. Hayward, T. J. Ward, and Alexander Smith, C.E. (secretary). The following gentlemen were elected members—Mr. John Cartwright, colliery manager, Rowley, near Dudley; Mr. Harry R. Harper, land and mine surveyor, Rowley; Mr. W. B. Ensor, engineer, West Bromwich; Mr. Davey Thomas, colliery manager, Glascote, Tamworth; and Mr. William John Rodgerson, mining student, Prescot, Lancashire, as a student. It was agreed to send a vote of condolence to the widow of Mr. R. Griffiths (Oldbury).

Mr. F. W. North, F.G.S., read a paper upon his inspection of the Stormbergen coal field of South Africa. He said the coal field of Cape Colony was, as far as could be estimated, of 2½ millions of acres. It ought not to be calculated, however, that the whole of the field held coal, for it was very frequently found in the mountains, and was wanting in the valleys because of denudation. Having chosen a suitable place nearest to Queenstown he worked some of the coal, and found its specific gravity was about 1·587, carbon, 61·021; hydrogen, 3·208; nitrogen, 2·190; sulphur, 0·434; oxygen, 2·178; ash, 30·320; coke, 75·260. Coal was fetching 2s. 6d. per 100 lbs., and some of it was sold at 3l. 10s. per ton of 2000 lbs. To meet competition it would have to be sold at 1l. 15s. Pit shafts and winding engines would not be wanted, for the coal lay horizontally, and might be worked from where it cropped in the side of the mountain. The water likely to come might easily flow away by raising the workings a little. The coal was of fair quality, although at present the inhabitants preferred the wood and ox dung. For ship purposes with 30 of ash it would be too bulky; but the best of the coal worked could be packed small, and so be condensed fuel. In times of war or in case of shortness of coal a good market might be made. It was not, however, until railways were opened that the coal trade could be developed.—Mr. North received a very hearty vote of thanks, to which he replied.—[We shall publish Mr. North's valuable paper entire in next week's Journal.]

Mr. Joseph Williams read a paper on "Carbonic Oxide," and showed that it was a deadly gas, artifically produced wherever carbonaceous substances were burnt with a deficiency of air.—From the speeches of those who proposed and seconded a vote of thanks to Mr. Williams for his paper and experiments, it appeared it was unsafe to approach fire-stink without a safety-lamp and the greatest precautions. Many accidents hitherto unexplained could now be accounted for, and the lesson to be learnt was that fire-stink was far more dangerous than generally supposed.

After the meeting Mr. Henry Johnson called attention to the fact that Mr. Price, a member of the Institute, and late of the Apedale Colliery, was about to be prosecuted for incapacity and neglect in the sad accident which happened six months ago. The coroner's jury had found a verdict of "Accidental death," and absolved the management from any blame in the matter. Notwithstanding this Mr. Price was about to be prosecuted on the 12th instant, and on Saturday last he had no notice of the proceedings against him. If the Home Secretary was to treat mining engineers in that unconstitutional way there was an end of their profession. He did not ask for a resolution, but he asked them to consider whether united action throughout the country should not be taken.

THE ART OF PUDDLING—PAST AND FUTURE.

At the North Staffordshire Mining Institute meeting at Stoke-on-Trent, on Monday, Mr. R. Howson, of Middlesborough, read a supplement to a paper which he read some months ago, on the "Art of Puddling, its Past, Present, and Future." He said—In the course of the last communication which I had the honour to bring before your society I endeavoured to trace the phenomena which took place in the operation of ordinary hand puddling, and to gather up some information applicable to machine puddling, which I believe is destined to supersede it. The question of eliminating the phosphorus, that *bête noir* of the process, was then discussed, but the reasons which underlie the difficulties of its elimination may well demand some further notice. Since that time I have had a more complete opportunity of studying the subject by means of two revolving furnaces erected at the Erimus Works, Middlesborough, besides which I have more recently had a favourable opportunity of comparing notes with other workers in the same field. I find the general conclusions arrived at agree so closely as to leave very little doubt of their correctness. There seems, in fact, to be a general conviction that these difficulties of the phosphoric question are so far cleared up that it only remains to adopt the best means for putting the acquired knowledge into practice, both for the manufacture of wrought-iron and steel out of the most impure brands of pig-iron. To begin with the process of puddling, and omitting the steps by which the following conclusions have been arrived at—What are the conditions which render the elimination of phosphorus a matter of such difficulty and uncertainty? The answer is best obtained by stating the question in another way. What is the quality of pig metal, assuming it to be phosphoric, which is best adapted for puddling? The reply is, that which is most free from silicon. Remove the silicon from the pig and the silica from the cinder and the phosphorus will remove itself, provided there is enough carbon in it to keep it in a liquid state. It does not require a very critical knowledge of chemistry (which indeed I do not pretend to) to understand why this is the case. To state it shortly, silicon in pig-iron has a higher affinity for oxygen than phosphorus; *pro tanto*, therefore, it forestalls and prevents the oxidation of the latter element. Again, silic acid has a higher affinity for the oxide base of the fettling than has phosphoric acid. It is even said that under certain conditions it will expel phosphoric acid already in combination with it. The presence of silica, consequently, in the cinder so far disturbs the condition by which alone the phosphorus is oxidised and its resulting acid absorbed. If this view commends itself theoretically to the scientific chemist, as it undoubtedly does, then the corresponding practice ought to reveal its truth, and this is really the case. I have become convinced by actual experience that when silicon in the pig-iron reaches 2 per cent. and upwards, it is impossible to obtain a good and invariable result as regards quality of puddled bar by one process only. Either the metal must first be refined, or it must be roasted in the puddling furnace, both methods having a similar effect, speaking comparatively—namely, the removal of the most part of the silicon. On the other hand, when this element in the pig-iron falls below 1 per cent., then a fair result may be relied on without any previous treatment.

In the Cleveland district it so happens that while the phosphorus in the pig is very nearly constant, averaging 1·5 per cent., the silicon varies in the most capricious manner from 0·5 per cent. in exceptional cases to as much as 5 per cent. It is this fact that has so often led to complaints and strikes of the much abused puddler, and it is this which has baffled all the attempts to reduce the art of puddling to a certainty. Moreover, it is this that has given such a marked advantage to the competition of steel by the Bessemer and Siemens-Martin processes, in spite of their being only (hitherto at least) applicable to the more expensive brands of pig-iron. By the latter methods, under all their modifications up to the present time phosphorus is inadmissible, whereas in puddling neither phosphorus nor silicon presents any difficulty when taken alone. It is the combination of the two which offers such an unassailable front. Both elements have to be eliminated while the metal is in a liquid state, but in the attempt to do this the carbon vanishes also, and the fluidity is gone before the complete conversion is effected. Hence the troubles of rail makers, and hence the opportunity for steel, which after all is the same in most respects as iron, provided the latter is manufactured on really scientific principles. Most of the members of this society will do doubt have read the very important paper contributed by its former president, Mr. Adamson, to the Paris meeting of the Iron and Steel Institute. In the discussion on this paper he characterised the process of puddling as one of the manufacture of concrete. With a germ of truth in it it cannot be denied, the term is of course an exaggeration. No one would more readily admit than Mr. Adamson that the process of puddling, if properly carried out, is capable of producing wrought-iron with properties which balance favourably with those of mild steel for a great variety of purposes. I will only refer to the well known fact that rails made long ago before the competition became so severe, were as a rule as good as the modern steel rail, and in fact have in many instances shown themselves possessed of durable property, far exceeding that of the average of steel. We have also the Staffordshire brands of bar-iron, with its facility for welding which for such a manufacture as that of chain cables is far more reliable than steel. With regard to plates, Mr. Adamson condemns those of puddled iron on account of their deficiency in lateral strength. Nevertheless there are many significent facts tending to show that Yorkshire and Staffordshire plates will still hold their own against steel, especially when greater care is exercised in puddling, and an improved system of rolling. What we have really got to do, then, is to determine that we shall no longer adhere to a system of manufacture the produce of which can by any stretch of criticism be compared to such a material as concrete. I have just called attention to the fact that when silicon is present in any notable quantity in pig-iron all is also phosphoric, and when there is an excess of silica in the fettling, more especially at the earlier stage of the process, they act as a formidable preventive to the due oxidation of the phosphorus. On the other hand, if the silicon (and its acids) are comparatively absent then there is but little difficulty with the phosphorus, and it is a corollary equally true that if phosphorus is comparatively absent then the presence of silicon is not detrimental.

I will not trouble the meeting with a detail of my own experiments, but will rather confirm these statements by what I have been lately able to glean in France, more especially in reference to the Godfrey and Howson furnace. At the Tamaris Works of the Terre-Noir Company they have had one at work for several months, and a paper was to have been read on the subject at the meeting of the Institute had there been time, by M. Eschalle, the managing director. I have been favoured with a perusal of this paper, in which the writer reports the removal of the phosphorus to a greater extent than he has ever experienced before, whilst the operation of puddling with liquid iron taken direct from the blast-furnace does not occupy a time of more than 25 minutes. It must be marked, however, that the pig is low in silicon as well as in phosphorus, not much exceeding 0·5 of each. At Hayanges Messrs. De Wendel, after trying a series of experiments, report a most favourable result. Their blast-furnaces produce several qualities of pig metal, the extreme grey containing—phosphorus, 1·819 per cent.; silicon, 3·60; while the extreme white gives—phosphorus, 1·10; silicon, 0·850, the carbon in both cases being very nearly alike—about 4 per cent. Observe the comparative deficiency of silicon in white metal, and on enquiry, as might be expected, it was ascertained that it

was this which was used in puddling, while the grey was found unsuitable. I may here note that in England grey iron is often employed when a superior quality of puddled bar is required. The reason of this is that it contains more carbone, or carbon, in such a condition as to maintain the fluidity of the metal for a longer period. At Hayanges it is evident that there is sufficient carbon in the white metal to effect the purpose, while its superiority for puddling consists in its low percentage of silicon. At the works of Messrs. Dupont and Fould I witnessed the working of several heats. The pig-iron contained on average—phosphorus, 1·7 per cent.; silicon, 1·4 per cent. The puddled bar was fairly good, but there is reason to think, judging from their general practice, that the phosphorus would not be lower than 0·3 per cent. A more perfect elimination of this element can only be procured by previously reducing the amount of silicon. At Fouchambault two days were spent, and a great number of heats witnessed, the duration of each heat averaging half-an-hour. In this instance, the analysis of the pig showed an excess of silicon, and a deficiency of phosphorus—silicon, 3·0 per cent; phosphorus, 0·27. If what I have stated above as to the effect of the interchange of these elements is correct, then the puddled produce of this pig ought to be good, and it proved to be so. The balls as they came from the furnace were trammed into solid homogeneous blooms, which were once heated and then rolled into finished bars direct. I could bring further evidence to prove the mutual counteraction of these two troublesome elements, but I will only refer, in conclusion, to the opinion of Mr. S. G. Thomas, a gentleman who has undoubtedly investigated the subject with great care and perseverance, and, it may be added, with a certain amount of success in quite an unexpected direction. The whole of this theory rests upon the single ascertained fact that an acid cinder prevents the elimination of phosphorus. If, therefore, he says, in effect we wish to manufacture steel either by the Bessemer or Siemens-Martin method out of phosphorus brands of pig-iron, the lining of the converter or furnace must be basic to begin with, and the cinder arising from the metal during the process must be rendered basic.

Whether this principle holds good at extreme high temperatures or not remains, perhaps, still to be proved, but it is undoubtedly true at the moderate temperature of the puddling furnace. Leaving the hematites out of the question, we have in England a vast variety of ore more or less phosphoric. The utilisation of these has of late years been gradually declining for want of the application of a simple rule. Silicon and phosphorus are incompatible elements. If both happen to be high, then, if we want something better than concrete, we must first get rid of one of them. In smelting phosphoric ores in the blast-furnace we must rest content with getting the whole of the phosphorus in the pig-iron. We have only, therefore, to deal with the silicon. How, then, are we to disestablish it? The rational way is to begin at the beginning, and smelt the iron for forge purposes with a high burthen and a comparatively low temperature of blast. What can be expected from the system of buying forge pigs haphazard in the open market, coming, it may be, off a foundry burthen, and containing an absolutely unknown quantity of silicon? Care in puddling iron may be all very well, but is care in selection of brands of no consequence? I believe it to be possible with any class of ores which we possess so to regulate the smelting process as to obviate all difficulties of puddling. But it may be said that there will always be pig-iron produced of unsuitable character, and this must be utilised. No doubt this is true, but, if so, then we must know what we have got, and deal with it accordingly. To make good puddled bar out of pig metal containing, as it often does, 1·5 per cent. of phosphorus and 3 per cent. silicon is absolutely impossible by one process. It must undergo a previous treatment whereby the greater part of its silicon may be removed. It so happens, therefore, that the old method of the refinery fire is founded on true principles, but it is too expensive, and must give way to more scientific methods.

At the same meeting, Mr. Ashworth's paper on "Gunpowder: Its Effects on the Atmosphere of a Coal Mine when Exploded," read at a previous meeting, was then discussed, each speaker advocating the employment of a better quality of powder in mines, which would not give off so much flame.

Messrs. Warsop and Hill, Nottingham, exhibited a patent self-acting arrangement for unloading and loading colliery cages; and Mr. James H. Price, of Rowley Regis, exhibited an apparatus for the prevention of overwinding, both of which attracted considerable attention. Mr. T. H. Mottram, mining surveyor, Tamworth, was elected a member of the Institute.

The Midland Institute of Mining Engineers, and the Testing of Safety-Lamps.—A meeting of the members of the Institute was held at Wakefield, on Wednesday, and in the course of the proceedings Mr. Wilson, manager of the Oaks Collieries, introduced the question of the proper testing of safety-lamps before they are placed in the hands of the miners. He pointed out that at a recent meeting Mr. Embleton, the ex-president of the Institute, gave them a number of illustrations as to the proper way of testing them. Mr. Embleton said that his recent experiments were made to show that the best inspections of safety-lamps were of no use unless they were tested by gas. It was resolved that the council of the Institute and a number of gentlemen, including Prof. Thorp, of the Yorkshire College, should form a committee to report upon the best test of safety-lamps before being sent into the workings.—A paper, by Mr. J. W. H. White, "On a Contrivance for Attaching Curves to Endless Ropes on Underground Planes," and another, by Mr. J. Nevin, entitled "Notes of a Visit with the North of England Mining Engineers to some of the Collieries in the North of France," were read.

Electric Blasting in Mines.—An interesting paper on this subject was read by Mr. G. G. André, M.E., at the meeting of the Society of Engineers, on Monday. The author described the advantages afforded by electrical firing as of two kinds:—Those due to the simultaneous discharge of the blasts, and those resulting from the nature of the means of ignition. He showed, by means of a diagram, that the total amount of work to be done was considerably diminished by simultaneous discharges, and that, as a natural consequence, the saving of time and money was proportionately increased; moreover he proved that another distinct advantage lay in the fact that the whole face of the rock was brought away comparatively clean and smooth, no projections or bosses being left, as in the case of single blasts. The main advantage resulting from the nature of the means of ignition was the increased safety of the operator owing to the fact that the charge could not possibly be ignited until he had had sufficient time to retire to a place of safety. With the ordinary safety-fuse, however, it is otherwise, the chargeman, after igniting the fuse, having to retire hastily from the spot, and always incurring a certain amount of risk. The author next explained that the majority of blasting accidents were due to the unexpected explosion of shots which had been approached by the men under the conviction that they had missed fire through a defect in the fuse. This difficulty is entirely removed by electrical firing, inasmuch as in case of failure, the charge cannot possibly be ignited afterwards. Another material advantage lies in the gain of speed, due to the same cause, all delay occasioned by having to wait the prescribed time—some 15 or 20 minutes—before returning to the shot which has missed being avoided. A minor advantage is the possibility of igniting the charge in the middle, a mode of firing which gives the best results. Mr. André explained that electric fuse should be so constructed as to be easily applicable to the charge of explosive used; should not be capable of being injured by rough handling; should be so prepared that the operator may have no difficulty in putting them into circuit; should be certain to explode under ordinary conditions of firing, and should explode simultaneously in large numbers. Electric fuses are of two kinds: the "Quantity" fuse, and the "Tension" fuse; the former may be ignited by the current from a battery, and the latter by that from a frictional, or other machine of high tension. In describing these two varieties Mr. André stated that the tension fuse was most satisfactory, as the mode of firing was more easy and secure with the machine than with the battery; and further that, with a higher tension, a larger number of shots might be fired simultaneously. He next described the tension fuses now in use, all of which he stated fulfilled the first four requirements, but broke down in the fifth. This difficulty the author has partially overcome with a fuse of his own construction. Upwards of 20,000 of these fuses were fired in groups of from 10 to 16, under all possible conditions, without a single miss-fire. The paper concluded with a few remarks upon the condition of the frictional machine at the time of using.

FOREIGN MINING AND METALLURGY.

Official tables show that the total production of coal in France in the first half of 1877 was 8,092,000 tons, of which 7,853,000 tons were coal and anthracite, and 239,000 tons lignites. In the second half of 1877 the production fell slightly below the foregoing totals, but only to a very small extent. In the first half of 1878 the total production amounted to 8,256,000 tons, of which 8,005,000 tons were coal and anthracite, and 251,000 tons lignite. The production thus increased in the first half of this year to the extent of about 3 per cent. as compared with the corresponding period of 1877. The general condition of the French coal trade does not exhibit much change.

Some revival has been noted in the iron trade of the French department of the Nord, but it can scarcely be said to be general at present. Some works have witnessed a continuous increase in their production since the commencement of this year, but others have had to curtail their operations. The Maubeuge Blast Furnaces Company produced 1000 tons per month in the first quarter of this year. In the second quarter the production rose to 1500 tons per month, and in the third quarter it has slightly exceeded 2000 tons per month. The company's manufacture consists especially of T-iron and girders of all sizes, finding their principal outlet upon the Paris market. It appears from official tables that during the first half of this year France produced 766,336 tons of pig-iron, against 763,873 tons in the corresponding period of 1877; 352,348 tons of wrought-iron, against 387,337 tons; 56,453 tons of sheet-iron, against 62,314 tons; and 130,801 tons of steel, against 110,494 tons.

Deliveries of coal have sensibly increased in Belgium during the last few days, as is usually the case at this period of the year. This is all that can be reported with respect to the Belgian coal trade, which has presented no unusual features no important transaction being noted of a character calculated to secure higher prices or to promote a revival in affairs. The value of the coal exported from Belgium in the first eight months of this year exhibits an increase of 174,720*l.* as compared with the corresponding period of 1877. The production of the Vezin Aulnoye Company in 1877-8 comprised 66,008 tons of pig and 40,313 tons of iron. A tolerable profit appears to have been realised for the year; but, under all the circumstances, it was deemed advisable not to distribute any dividend, but to carry forward the whole of the profits of the past twelve months.

The John Cockerill Company (Seraing) has just reported progress for 1877-8. It appears that the total turn-over of the company for 1877-8 was 1,230,000*l.*, or about 120,000*l.* more than the corresponding turn-over in 1876-7. All departments of the company's operations were conducted at a profit last year, but the greatest activity prevailed in the steelworks. The Bessemer steelworks made 83,000 tons in 1877-8, as compared with 65,000 tons in 1876-7. The rail-rolling mill turned out 57,000 tons in 1877-8, as compared with 45,000 tons in 1876-7. The industrial profit of the company in 1877-8 was in round figures 96,000*l.*, and after making various statutory deductions the company had a disposeable balance of 49,744*l.*, of which 33,152*l.* was applied to the payment of a dividend of 2*l.* per share. An issue of additional share capital is under consideration and discussion. The letting of contracts for 54 locomotives for the Belgian State Railways has given some little stimulus to the Belgian iron trade. Some contracts have been given out this week for 25 turn-tables for the same system. MM. Robin and Co., of Braine-le-Comte, undertook to supply tables of 16 ft. diameter, similar to those in use on the Northern of France Railway, with cast-steel rails, at 96*l.* 4s. per table.

THE MINERAL RESOURCES OF THE TRANSVAAL—No. III.

In connection with the Transvaal an admirable guide to agriculturalists, capitalists, and miners was published a few years since by Messrs. Foster, of Cape Town, which, although written for a special purpose, contains a large amount of information of general interest. It was compiled by Chev. O. W. A. Forssman, Portuguese Consul at Potchefstroom, and for 20 years resident in the Transvaal. The principal object was to offer for sale to private persons or companies certain landed properties in various parts of the province; but, as these properties cover an area of nearly 500,000 acres, very varied information was necessarily collected, with a view to the preparation of the recommendatory descriptive notices. It has been remarked that the Transvaal is certainly a beautiful and rich country, but there are drawbacks in the absence of a seaport and cash market near at hand, and expensive transport. At the time the objection was made it was, no doubt, justified; but circumstances have since then entirely changed, and all the drawbacks are now fortunately removed. On the western boundary there is an unlimited cash market, with a fine level road leading to it—the diamond fields—where all eatables and drinkables find a ready sale at high prices. At the northern boundary there are the Tati gold fields, and the whole interior of the South African cash market; and at the eastern boundary are the newly-discovered Zoutpansberg and Marabastad gold fields.

It is remarked by Mr. Forssman that it also gives new life to mining enterprise, considering that the seaport, Delagoa Bay, is so near the mining districts of Zoutpansberg, Waterberg, Rustenburg, and Leydenburg, but it must be obvious that so long as the territory between the Lobombo Mountains and the ocean is in the possession of the Portuguese the outlet on the eastern side of the Transvaal is commercially closed, and that at least for mining purposes property in the districts mentioned and dependent upon that outlet is practically worthless; as, judging from the manner in which the Dutch compel passengers to pay import duty at Rosendaal, although merely carrying the article liable from Antwerp to London by the Vlissingen route, it is scarcely to be expected that the Portuguese would admit merchandise into their territory brought by way of the Lobombo Mountains upon more liberal terms. This would appear to subject all minerals to what is equivalent to a 7 per cent. *ad valorem* export duty if shipped at Delagoa Bay, and to 9 per cent. *ad valorem* if shipped at any other port in the Portuguese province—charges which would certainly be insupportable. Upon coal, however, there is no duty, so that the circumstances which would prohibit the profitable working of the other minerals would not affect coal properties. For agricultural and grazing purposes many of the farms described in Mr. Forssman's book appear to offer fair attractions, especially with a little judicious arrangement for securing a constant supply of water, and not a few of them appear also to possess mineral indications worthy of attention; thus the surveyor's report upon Rietkuil Farm, in the Pretoria district, states that "there is sufficient stone near at hand for building purposes, and within six miles there is surface coal in abundance, while the farm itself is situated in the middle of the coal country, and I have no doubt that were borings to some depth made coal would be found on it." Again, in Nooitgedacht district Nylstroom, Waterberg, "there is an abundance of water, and plenty of firewood on it for all purposes, and it lies right in the midst of the auriferous range of hills, beginning at the Tati, and running on to Leydenburg district in a south-easterly direction." At Goudfontem, in the same district, a mineral, supposed to be cobalt, was also found in abundance. At Tooiskraal, same district, "I got several pieces of copper ore and some lead, and on Hartebeestpoort if looked for I am sure both minerals will be found in large quantities." The farm Jonghanshock, same district, below the mountain, "is rich in mineral wealth, and the Kaffirs, &c., are constantly mining copper, &c., on that place. It has also not far below a quartz range in which gold is found, and will very probably be rich in alluvial."

These instances might be repeated almost indefinitely, and almost every mail brings additional information of further mineral development. Quite recently, for example, it was announced by a local correspondent that several claims have been taken at Blaauwbank, in the Transvaal, where gold has lately been found, and the more sanguine prospectors predict that it will turn out a remunerative field. Blaauwbank is situated in the district of Rustenburg, but is nearly equi-distant from the town of that name and Pretoria and Potchefstroom. It may consequently be looked upon as being in the centre of the Transvaal, and a field thus situated is likely to assist in the advancement of the country, especially as the farms in that neighbourhood are the pick of the land, and are generally occupied. Altogether, the Transvaal offers a great field for capitalists and miners, and it cannot be questioned that the present is the time for turning it to good commercial account.

THE DIFFERENTIAL EXPANSIVE PUMPING ENGINE.

The differential pumping-engines, made by Messrs. Hathorn Davey, and Co., engineers, of Leeds, are now largely used for draining collieries and for town water supply both in England and Wales. Some have been sent to Germany, and many powerful engines have been made under Mr. Davey's patents in America. The engines are sometimes self-contained with the pumps and placed underground, at other times fixed on the surface and employed in actuating pumps by means of spear rods. The engines are made in two forms—the single and the compound expansive engine. The Cornish type of pumping-engine has long stood pre-eminent for economy of working, and efficiency in raising water from great depths. Many years ago the expansion of high-pressure steam was carried to its extreme limit in Cornwall, as an instance in Taylor's engine at the United Mines. Steam of high-pressure was cut off at one-tenth of the stroke, its duty being 112,000,000. The great velocity given to the piston and spear rods at the commencement of the steam stroke was found by experience to cause too great a strain upon them. A more uniform velocity of piston is desirable; at the present time we find the practice in Cornwall is to cut off at one-third, and seldom as early as one-fifth, the stroke, which will account for the falling off in duty of late years, the average duty being now probably a little over 45,000,000.

The high degree of expansion so requisite for the economical use of steam cannot be used safely in a single cylinder. Messrs. Hathorn and Co. have, therefore, adopted the compound engine, whereby a high degree of expansion is obtained, and a more uniform velocity of piston. The steam is expanded twice, first in the small, then in the large cylinder. A ten-fold expansion is as easily obtained in the compound engine as a three-fold in the single cylinder.

When we add that the differential gear is another important feature of the compound engine, adapting itself to the load and to the changed conditions in the work, we think altogether we are in possession of an engine reliable and of great value to the mining world. In the ingenious differential valve gear of Mr. Davey the main slide valve is subject to two motions, one from the moving parts of the engine, and another derived from a subsidiary cylinder and piston. The latter gives motion to a water cataract, so that the escape of water from the cataract controls the movement of the subsidiary piston, and through it the motion of the main slide valve. The speed of the engine is thus regulated by the cataract, and should the engine suddenly lose its weight by a breakage in the pit or other cause the two motions of the valve gear effect the immediate shutting off or reversing of the steam, and consequently any damage to the cylinder of the engine is avoided. The differential valve gear has been applied in several instances to Cornish and other beam engines, and to the direct-acting Bull engine, with uniform success.

The following are some of the differential engines that have come under our notice. These have been placed sometimes underground, in other places on the surface. They range from two cylinders of 45 in. and 72 in. diameter respectively to cylinders of 15 in. and 30 in. diameter, and some under the latter size. There are two compound engines at South Durham Colliery; each engine has a 22 in. and 54 in. cylinder 6 ft. stroke, and each forces 500 gallons per minute 154 fms. in height, also giving power to a hydraulic engine to force 500 gallons per minute 64 feet in height.

The engine at Harrington Winning, one of the Lambton collieries, has cylinders of 27¼ and 44 inch diameter, 5 ft. stroke, is placed at the top of the pit, and works by means of two quadrants, and rods, three forcing lifts of pumps, and one bucket-lift. The engine and pumps, as described, were used while the pit was being sunk, and this arrangement, with forcing rams, works as satisfactorily as with bucket-lifts, the method usually practiced in Durham. At the Nunnery Colliery, near Sheffield, there are three compound engines placed underground, each having 33 and 54-inch cylinders, 6-feet stroke, to raise each 1000 gallons per minute 57½ fms. in height. At the Navigation Colliery a compound differential engine, with 30 and 50-inch cylinders, forces 400 gallons per minute 1100 ft. high in one lift. At East Hetton Colliery, near Durham, a compound engine is placed on the surface, having 34 and 64-inch cylinders, 7½ ft. stroke, to raise 1500 gallons per minute 100 fms. in height, by means of two quadrants and rods. The initial steam pressure was stated in 1875 to be 57 lbs., and the ratio of expansion one-fifth, the average piston velocity about 160 ft. per minute, the acceleration being nearly uniform. The maximum velocity would be double this, or about 320 ft. per minute. A Cornish engine, with the same expansion, would have a maximum speed of at least 1000 ft.

To show the economy of the compound expansive engine, it may be stated that after the erection of the above-named engine at East Hetton Colliery the saving in fuel was 150 tons per fortnight between this and an old beam condensing engine previously used. It must be admitted the old beam engine was in a bad condition. At the South Durham Colliery a compound differential pumping engine actuates, by means of quadrants, two 20-in. plunger pumps, each 10 feet stroke, and both employed in forcing 700 feet in one lift. This is we believe the heaviest pumping work to be found in England. So successful has the South Durham plant proved that the Staveley Company have commenced to put down precisely similar plant from the same patterns. The South Durham engine has 45 in. and 72-in. cylinders, by 10-ft. stroke, and is equal in power to a 114-in. Cornish engine. The town of Croydon is supplied with water by means of a compound differential pumping engine, pumping 2,800,000 gallons in 24 hours, to supply a population of 53,000 persons. The engine has cylinders 30 in. and 60 in. diameter, and a stroke of 7 ft., and does the work formerly done by three Cornish engines, one 60 in. and two 30 in. The differential engine works from the old boilers which supplied the Cornish engines, and effects a saving of over one-third of the fuel formerly used. This is proved by the coal books, in which the work done and coal consumed is accurately recorded from day to day. The safety of the differential engine is one of its striking peculiarities.

At the visit of the Society of Engineers to the Croydon Waterworks the other day, it was publicly stated by a member of the local board that the engine had proved its safety in the event of a loss of load in a most complete way. One night one of the valve seatings of the pump came out, and tilted over on its side, suddenly throwing the load off the pump whilst the engine was going at its full speed. So completely did the differential gear act that the steam was reversed to catch the piston, and not the slightest damage resulted—not so much as striking the catches. If this loss of load had happened with a Cornish or any other direct-acting pumping engine of the same size it would have smashed itself to pieces, because the piston would have rushed to the end of the stroke with the full steam pressure on it, and nothing to stop it but the spring beams. The town of St Helens is also supplied with water by means of a pair of compound differential engines, each capable of pumping 1,500,000 gallons per day. When the engines were first started one or two of the defective mains burst without the slightest damage occurring to the engines.

Messrs. Hathorn and Co. have erected single cylinder engines of both the non-condensing and the condensing type. Of the former several of 40, 30, and 20 in. cylinders are in operation. One of 52 in. diameter of cylinder and 5 ft. stroke is at work in Durham. It raises 300 gallons per minute 83 fms. in height. The pair of engines at Clay Cross are underground. Each cylinder is 20 in. in diameter

by 3-ft. stroke, raising 100 gallons per minute 1000 ft., or 166⅔ fms. in one lift. The single cylinder condensing engine has been adopted in numerous instances, ranging from 50 in. to 20 in. diameter and under. Some of these are underground, others on the surface. The pair of engines underground at Newton Cap Colliery have each 26-in. cylinder by 3-ft. stroke, forcing water in one column 1300 gallons per minute 40 fathoms in height. A single cylinder 34-in. diameter 4-ft. stroke at Wingate Grange Colliery placed underground forces 250 gallons per minute 100 fathoms in height.

COAL, MINE GASES, AND VENTILATION.

That an acquaintance with the nature of the gases met with in the working of coal is calculated to enable mine managers to guard against one of the greatest sources of danger connected with colliery operations can scarcely be doubted, but there has hitherto been considerable difficulty in obtaining anything like a satisfactory account of them without perusing a large number of separate works; this difficulty has, however, now been to a great extent removed by the publication of Mr. J. W. Thomas's admirable little treatise on Coal, Mine Gases, and Ventilation,* in which all that the practical man is likely to require is carefully brought together in a compact and readable form. Passing over the chapter upon the formation of coal, which is, of course, speculative, there is one upon the gases in coal and the deterioration of coal by exposure to atmospheric influences, which is well worth reading. It is stated that all coal contains gas enclosed within its pores or interstices, the nature of these gases varying with the character of the coal and the geological age to which it belongs. It is pointed out that beyond the difficulty of collecting gases over water there is no chance of proving that the gases so collected are the same as those which would be evolved at the ordinary temperature of the atmosphere. The contact of hot water with the coal, and its subsequent access to the interior portions, may have the effect of modifying the evolution of the gases, and there is a probability that even the character of the gas may be modified. It will be readily seen that there is considerable difficulty attached to the collection of the gases enclosed in coal on account of the tendency of the air to become mixed with them.

After various preliminary endeavours to devise a more accurate and expeditious method of analysis, Mr. Thomas fixed upon that which will now be briefly described. He made it a point to procure the samples in lumps about 10 in. cube, and to submit them to analysis as speedily as possible. Slices of coal were sawn out of the middle of the large cubes, and a strip about ⅛ in. in thickness and 6 to 8 in. in length was next cut from the middle of this slice, the edges rounded off so as to make it slide readily into a glass tube of the proper diameter. The coal was brushed with a feather to remove any adhering dust, and speedily placed in the glass tube, one end of which had previously been drawn out into a narrow neck so as to form a connection with the Sprengel mercurial pump. The other end was then sealed off before the blow-pipe at a sufficient distance from the coal to prevent any material rise in temperature. The usual water joint connection was then made with the Sprengel pump, the air exhausted as quickly as possible until almost a perfect vacuum had been obtained, and the last portion of the gases which was brought over collected and subjected to analysis. Many of the bituminous and steam coals of the South Wales coal field are of a porous nature, and far from hard or dense; and from their physical aspect it appeared probable that upon withdrawing the air from around the strips of coal, and on the formation of a perfect vacuum, a large portion of the gases enclosed in the coal would escape. This was not found to be the case, however, as very little gas was evolved from any of the coals examined, even when almost a complete vacuum had been obtained, and the amount of gases so given off rarely exceeded 2 or 3 cubic centimetres per 100 grammes of coal.

When the whole of the air had been removed the tube containing the coal was immersed in a vessel of boiling water, and kept at a temperature of 100° C. for about seven hours, or until the mercury pump ceased to bring over any appreciable quantity of gas. The gases thus evolved were collected in graduated tubes. From 10 to 20 grammes of coal were usually employed in each experiment, according to the nature of the coal and the quantity of gas evolved, a very small quantity of anthracite being sufficient to furnish an ample amount of gas for analysis, whilst highly bituminous coals gave off so little gas that 30 grammes of coals were required to yield the necessary volume. Duplicate analyses were invariably made of the gases evolved from each sample of coal, and in cases where the results of the second experiment differed from the first a further analysis was made. From his experiments Mr. Thomas concludes that the nature of the gas occluded in coal depends not so much upon the structure of the coal as upon the conditions under which its formation has taken place, and the depth below the surface at which the coal is situated. Marsilly further states that the gases evolved from coal in pits liable to fire damp consist almost entirely of marsh gas, while the gas from coal obtained in mines where no fire-damp is found consists chiefly of nitrogen. Mr. Thomas finds that to a certain extent this is true, but it is not always the case. According to the law of diffusion and the law of transpiration of gases, marsh gas being the lightest gas which is imprisoned in the interstices of the coal should, and does, escape more quickly than any other. This rule, however, only holds good in mines which are situated in a fiery part of a coal field, and in which the coal holds enclosed an enormous volume of explosive gas—such as the steam coals of South Wales and North of England coal fields and some of the Wigan coals. As a seam or vein becomes more and more bituminous in character, or in passing from the anthracite to the bituminous seams in the coal fields referred to, an intermediate class of coal is met with which evolves some marsh gas, but in addition an appreciable quantity of carbonic acid and nitrogen.

In the true bituminous—that numerous class of house coals—the quantity of marsh gas given off in the mines in which these coals are worked does not bear an exact ratio to that of the carbonic acid and nitrogen, while in the majority of instances marsh gas is almost if not entirely absent. When this is the case nitrogen, it is true, forms a large proportion of the enclosed gas, but the percentage of carbonic acid is always so considerable that it must be regarded in association with the niirogen. In the gases enclosed in Scotch cannels and lignites carbonic acid takes the entire lead, so that it might be said with equal justice that coals evolve carbonic acid for the most part in mines free from fire-damp. It is not safe, however, to draw any fast line as to the nature of the gases evolved in fiery and non-fiery mines, as they vary considerably.

Subsequent chapters treat of the properties of matter, the nature of gases, &c., explosions in coal mines, and ventilation; but the above will suffice to give an idea of the general style of the treatise. That a very large amount of information has been brought together is beyond question, and the volume has the further advantage that the information is precisely of the character most likely to prove useful to practical men. To those preparing for the examinations for the Certificate of Competency this book will be invaluable.

* "A Treatise on Coal, Mine Gases, and Ventilation, with Copies of Researches on the Gases enclosed in Coal." By J. W. Thomas, F.C.S. London: Longmans, Green, and Co.

Paris Exhibition.—A silver medal has been awarded Messrs. Griffiths, Fletcher, and Berdoe, of Liverpool and London, for their Griffiths' Patent White, or substitute for white lead, that was brought before the International Congress of Hygiene in Paris, by Dr. Phipson and Professor Lutschaunig.

Messrs. Pixley and Abel.—Gold.—During the past week we have received about 131,000*l.* from New Zealand, and very large sums in coin from the Continent; there being very little demand for export, the Bank has received the great bulk of the arrivals, the amount sent in since our last circular of the 3rd instant being 1,611,000*l.* A few shipments have been made to the United States, and it is probable that an increased demand will shortly be experienced for gold to be sent thither: 50,000*l.*, sovereigns, have been withdrawn for Egypt.—Silver.—In this market a very dull and unsettled feeling has prevailed during the past week; the enquiries have been very limited, at the same time the supplies have been but small. Transactions took place at 51⅛d. per oz. a few days ago, the rate receded to 51d., and improved again to 51⅛d. yesterday, as soon as it was known that no India Council Bills had been allotted; it is, however, difficult to say whether this price can be maintained, as there are no quotations of Exchange from India, and no orders for export to the East. We have received 5000*l.* from New Zealand, and about 10,000*l.* from America. The P. and O. steamer sailing to-day takes no silver to India.

THE

Isabelle Gold and Silver Mining Co.

(LIMITED).

Entitled to a CASH BONUS of 100 per Cent., even supposing the remaining £15 per share is called up, or 400 per cent. on the amount now asked for.

DIRECTORS.

The Right Honourable the EARL POULETT, 7, Palace Gate, Kensington, W., and Hinton St. George, Crewkerne, Somerset.
Major-General CHARLES CAMPBELL, 18, Gloucester-place, Portman-square, W.
ROBERT GILLOW DUNN, Esq., 17, Devonshire-street, Portland-place, W.
Managing Director—HENRY HAYMEN, Esq., formerly Chairman of the Don Pedro North Del Rey Gold Mining Company, which company, during his Chairmanship, paid for several years dividends of 100 per cent.

The SUBSCRIPTION LIST for SHARES is CLOSED. The allotment has been made. The Letters of Regret and Allotment will be posted on Friday, the 11th.

OFFICES,—114, PALMERSTON BUILDINGS, OLD BROAD STREET, E.C.

ABRIDGED PROSPECTUS.

Exchequer Gold and Silver Mining Co.

(LIMITED).

Capital £200,000, in 200,000 Shares of £1 Each,

Of which 99,667 Shares have been issued, and are fully paid-up.

(The paragraph following is Copyright.)
Issue of 100,000 £1 Shares, EACH £1 Share being entitled WITHOUT PAYMENT to a £1 Coupon, redeemable by Annual Drawings from the interest of £10,000 to be invested in the names of Trustees in CONSOLS, and by an annual payment from the company of £2000; the first annual payment to be made on the 30th November, 1880. Shareholders subscribing for these shares will ultimately hold their shares free of cost. The cost may be repaid in 1879, whilst the holder of the last undrawn £1 Coupon will in addition receive TEN THOUSAND POUNDS CONSOLS.
(The preceding paragraph is Copyright.)

DIRECTORS.

The Right Honourable the EARL POULETT, Hinton St. George, Somerset, and 7, Palace Gate, W.
The Right Honourable the LORD LOUTH, Louth Hall, Ardee, and the Junior United Service Club, S.W.
Major-General CHARLES CAMPBELL, 18, Gloucester-place, Hyde Park, W., and the Oriental Club, W.
SAMUEL SMITH, Esq., 15, Stratford-place, W., and the Portland Club, W.
HENRY SYME, Esq., F.R.G.S., 60, Palace Gardens Terrace, Kensington, W.

Bankers—The Consolidated Bank, Threadneedle-street, London.
Broker—John Inchbald, Esq., Stock Exchange, and 2, Copthall-court, E.C.
Solicitor—Osborn Jenkyn, Esq., 64, Lincoln Inn-fields, W.C.
Secretary—W. C. Chalmers.

The shareholders of the Exchequer Gold and Silver Mining Company (Limited) having resolved to prosecute the works with vigour, have authorised the directors to raise £100,000 of additional capital.

The manager is Lewis Chalmers, Esq., formerly Justice of the Peace of the county of Aberdeen, and acting chief magistrate of Fraserburgh, in Scotland. He obtained his present appointment in California by reason of testimonials of the most favourable character, from Lord Saltoun, Sir James Dalrymple, M.P. for Portsmouth, William Leslie, Esq., late M.P. for Aberdeenshire, Sir Alexander Anderson, Lord Provost of Aberdeen, William Cosmo Gordon, Esq., of Fyvie, and other gentlemen of high social and commercial standing in the United Kingdom. In addition to the practical knowledge of Californian gold and silver mining, which he has obtained during his residence of nearly eleven years in that country, he qualified himself, before leaving England, as a practical assayer under Messrs. Johnson, Matthey, and Co., assayers and melters to the Bank of England, from whom he holds a certificate of his competency.

Full prospectuses and forms of application for shares may be obtained from the company's bankers, brokers, and at the offices of the company, 114, Palmerston Buildings, Old Broad-street, London, E.C., where every information will be afforded respecting the company's property, and plans and photographs may be seen.

EXCHEQUER GOLD AND SILVER MINING COMPANY

(LIMITED).

The SHARE LIST will be CLOSED on MONDAY, October 14, for LONDON; WEDNESDAY, October 16, for COUNTRY; and MONDAY, October 21, for CONTINENTAL APPLICATIONS.

Capital £200,000, in 200,000 Shares of £1 each, of which 99,667 have been issued, and are fully paid up.

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Issue of 100,000 £1 Shares, EACH £1 Share being entitled WITHOUT PAYMENT to a £1 Coupon, redeemable by Annual Drawings from the interest of £10,000 to be invested in the names of Trustees in CONSOLS, and by an annual payment from the company of £2000; the first annual payment to be made on the 30th November, 1880. Shareholders subscribing for these shares will ultimately hold their shares free of cost. The cost may be repaid in 1879, whilst the holder of the last undrawn £1 Coupon will in addition receive TEN THOUSAND POUNDS CONSOLS.
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EXCHEQUER GOLD AND SILVER MINING COMPANY

(LIMITED).

The following letter has been served on the Editors of the Daily News and the World:—

"64, Lincoln's Inn-fields, W.C., October, 1878.

"Sir,—I am desired by Earl Poulett and the Directors of the Exchequer Gold and Silver Mining Company (Limited) to inform you that they must hold you responsible for the statement made in your paper that the prospectus of the Exchequer Company is a lottery.

"Before the prospectus was issued I was consulted by Earl Poulett and the other Directors on the subject, and I informed them that, in my opinion, the proposed prospectus was not a lottery, and was perfectly in accordance with law.

"I must request that this letter may be inserted in the next issue of your paper.

114, Palmerston Buildings, Old Broad-street, E.C. "I am, Sir, your obedient servant, OSBORN JENKYN."

Registration of New Companies.

The following joint-stock companies have been duly registered:—

Gwern-y-Mynydd (Limited).—Capital 40,000*l.*, in shares of 4*l.* To acquire by purchase or otherwise a certain mining sett, comprising Gwern-y-Mynydd. The Cathole, Pilkington, Deborah, Glan Alim, and South Hafod lodes situate in Flintshire, according to an agreement made between the Mold Mines (Limited) of the first part, T. Bantock of the second part, and W. J. Lavington, as trustee, for the company, and also the purchasing and acquiring of any other lands, minerals, &c., in the United Kingdom. The subscribers (who take one share each) are—William N. Neale, Elm-court, Temple, barrister; H. D. Jencken, Goldsmith Buildings, Temple, barrister; C. Cadogan, Brixton, accountant; A. C. Brice, 11, Queen Victoria-street, merchant; W. Eckersley, 4, Westminster Chambers, railway contractor; M. King, High Buck, gentleman; William Hope, Wimbledon, surveyor.

Frosterley Lead Mining Company (Limited).—Capital 10,000*l.*, in shares of 1*l.* Established for purchasing, opening out, working, and carrying on the Frosterley Mine, on the Dryburnside Estate, in the parish of Frosterley, in the county of Durham. The subscribers (who take one share each) are—H. Thompson, Stratford, accountant; E. Evans, 135, Bishopsgate-street Without, mine agent; R. Emerson, 33, Campbell-road, Bow, accountant; T. Warne, 19, Argyle-street, silk agent; W. D. Sibbey, 20, Bartholomew-square, news agent, E. Walter, 3, Whitmore Cottages, Kingsland, architect; F. J. Hammond, Kensington Gardens square, surgeon.

St. Martin's Colliery Company (Limited).—Capital 2000*l.*, in shares of 1*l.* Established for the winning, getting, manufacturing, and otherwise disposing of coal, cannel, slack, ironstone, fire-clay, and other minerals, &c., in the parish of St. Martin's, Salop, and elsewhere, and the doing of all things conducive to the attainment of the above. The subscribers are—A. Hill Trevor, Denbighshire, M.P. 250; Robert Mackie, Oswestry, surgeon, 250; F. G. B. Swete, Oswestry, banker, 50; Charles W. Roberts, Oswestry, banker, 50; J. D. Owen, Deefield Ellesmere, brewer, 20; William Dawes, Oswestry, ironmonger, 20; H. Beckitt, St. Martin's Colliery, manager, 20.

British Electric Light Company (Limited).—Capital 100,000*l.*, in shares of 10*l.* each. To bring into public notice the advantages of electric force and power for general illuminatiag purposes, selling and granting licenses, &c. The subscribers (who take one share each) are—J. T. Emmerson, Knatsford, J.P.; E. J. Reed, Broadway, Westminster; M. P. L. Clark, 6, Westminster Chambers, civil engineer; J. Hubbach, Liverpool, J.P.; T. H. Millbank, Westminster, engineer; M. B. Ward, Brighton, mechanical engineer; C. T. Bright, Westminster, civil engineer; A. S. Blandy, Westminster, civil engineer.

Sun Electric Light Company (Limited).—Capital 5000*l.*, in shares of 5*l.* To adopt and carry into effect an agreement between C. Wrightman Harrison and John Henry Downs for the company, for the acquisition of all rights, privileges, and interests of the said C. W. Harrison in or to any letters patent or licences for the United Kingdom, the Channel Isles, and the Isle of Man, for improvements in obtaining light by electricity. To acquire real or leasehold estate in the United Kingdom or elsewhere. The subscribers (who take one share each) are—Walter Strickland, 19, Birchin-lane; J. M. Pimvill, 31, North Villas, Camden-square; J. H. Downs, 76, High-street, Putney; C. W. Harrison, 13, Earl's-court Gardens; T. P. Bedford, 11, Queen Victoria-street; W. H. Boothby, 57, Wood-street, Woolwich; J. P. Lythgoe, 15, Tressillian-road.

Reversion Purchase Company (Limited).—Capital 100,000*l.*, in shares of 5*l.* each. To purchace of, and amalgamate with, the Russian Mortgage Company (Limited). To buy annuities, life interests, and reversionary interests of every description, and to do all such other things as are incidental or conducive to the attainment of the above objects. The subscribers are—W. Standing, 63, Queen Victoria-street, 1; E. Baggaley, 1, Mitre-court Buildings, 10; G. E. Ashburner, 25, Carlton-road, 20; H. C. Eliott, 11, Gray's Inn-square, 20; T. S. B. Kirkpatrick, 32, Eccleston-square, 1; J. Walker, Croydon, 5; S. Rendall, 27, Bedford-row, 20.

Liverpool Cold Storage Company (Limited).—Capital 10,000*l.*, in shares of 1*l.* To develope a system of refrigeration applicable to the storage of fresh meats, fish, fruit, &c., in buildings in Liverpool and elsewhere. The subscribers are—D. W. Parsons, Liverpool, 5; F. J. M'Adam, Liverpool, 5; H. J. Stevenson, Liver-

pool, 5; J. H. Gittins, Liverpool, 5; W. Jones, Liverpool, 5; W. W. Jones, Liverpool, 1; J. Thompson, Liverpool, 5.

Electric Lighting Company (Limited).—Capital 100,000*l.*, in shares of 10*l.* To light thoroughfares, streets, public places, public or private buildings, &c., by means of electricity, magnetism, or other similar agency. The subscribers are—Emile Erlanger, 43, Lothbury, banker, 225; R. J. Hood, 38, Lee-terrace, civil engineer, 10; L. Lawson, 2, Brook-street, gentleman, 225; M. F. de Kierzkowski-Stewart, civil engineer, 10; R. A. McLean, 8, Old Jewry, accountant, 10; Philip Rose, Rayners, Penn, baronet, 10; J. Hollingshead, theatrical manager, 14, Pall Mall, 10.

The Skegness Brick and Coal Company (Limited).—Capital 5000*l.*, in shares of 5*l.* each. Established for the acquiring of the right to use any patent or other invention for the manufacture or burning of bricks, tiles, &c. The purchase of any lands in Great Britain and Ireland suitable for brickmaking. The subscribers are —H. V. Tippet, Sandbeck, Tickhill, 40; G. Dunkley, Skegness, 20; H. Dunkley, Skegness, 10; J. W. Kirkman, Sutton-le-Marsh, 10; C. Hildred, Skegness, 10; J. M. Thompson, Skegness, 60; T. Simmonds, Skegness, 5.

Town Arms Hotel Company (Limited).—Capital 7000*l.*, in shares of 5*l.* each. Formed for the acquisition, loan, or otherwise of the house, yard, out-buildings, stables, and premises situate in Fore-street, in the borough of Bodmin, Cornwall, known as the Town Arms Hotel, and the carrying on the business of an hotel in all its branches. The subscribers are—E. T. Crabb, Bodmin, 50; J. D. Williams, Bodmin, 10; J. Menhinnick, Bodmin, 10; W. Pascoe, Bodmin, 20; W. J. Hicks, Bodmin, 50; Charles Crabb, jun., Bodmin, 25; T. Pellow, Bodmin, 10.

WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,

MINEOWNERS, STOCK AND SHARE DEALERS, &c.

1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. Watson Brothers to make their Circular now published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of Mining Shares up to Four o'clock.

They also buy and sell shares for immediate cash or for the usual fornightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charges for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in upon the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.

D'Eresby New Capital.—In reply to one or two enquiries, we may say that the new shares will participate in all profits and advantages equally with the old when paid up to 10*l.* each. A holder, as was explained last week, of 1-512th, on payment of 10*l.* gets 2-1024ths, and if a dividend were declared (say), for sake of explanation, of 10s. per share he would, on having paid the 10*l.*, receive 1*l.*, or 10s. each share. If, on the contrary, the like dividend were declared before the 10*l.* had been paid up, he would get 10s. on 1-1024th and 5s. on the 5*l.* he had paid on the other. Anyone can, however, pay up in full if they desire it, and would have to do so before transferring the share.

D'Eresby Consols.—The cross-cut driving towards the Cobblers' lode to cut it about 20 fms. below, where it was so rich in the old men's workings, is in the deep adit, and driving on an east and west lode in which a great vugh or cavity has just been met with; this has changed the hard character of the ground, and is a favourable indication for lead. When the Cobblers' lode is intersected it will be at the junction with the east and west lode—another favourable feature.

Pant-y-Mwyn.—We have received a great many communications from shareholders and others this week, and having been absent from town are not able to notice them in detail. Our remarks of last week would show that we have no antagonism against the mine, which we have all along spoken of as a good one, but the style of the secretary's letter compelled us to justify the remarks we had made on the machinery, and to say more, perhaps, than we should otherwise have done. We have not the pleasure of knowing the directors, even by name.

Saturday, Oct. 5.—Market very dull. Tin shares depressed. Carn Brea, 31 to 33; Dolcoath, 21 to 23; South Condurrow, 10 to 10½; Tincroft, 5¼ to 6½; South Frances, 4¾ to 5¼; Agar, 3 to 3½; Grenville, 1½ to 2; Aberllyn, 11 to 13; Clementina, 1¼ to 1½; Van, 17 to 18; Great Laxey, 17 to 18; East Van, 3 to 3½; Tankerville, 4 to 4¼; Roman Gravels, 7 to 7½.

Monday, Oct. 7.—Market generally very quiet. Dolcoath firmer. Carn Brea, South Frances, Roman Gravels, and Tankerville weaker. Dolcoath, 2*l* to 24; Carn Brea, 27½ to 32½; South Frances, 4½ to 5; Roman Gravels, 6¼ to 7¼; Tankerville, 3⅞ to 4⅛; Rookhope Lead, 10s. to 15s.; Clementina, 1¼ to 1½; Aberllyn, 11 to 13; Grogwinion, 2½ to 3; Leadhills, 2 to 2½; Pateley Bridge, 3¼ to 4¼; West Tolgus, 47½ to 50; Peevor, 5¼ to 6¼.

Tuesday, Oct. 8.—Market continues very depressed, and there is very little change in prices since yesterday. Tankerville a shade easier at 3¾ to 4.

Wednesday, Oct. 9.—Market again quiet, and the following are almost nominal quotations:—Van, 17 to 18; Great Laxey, 17 to 18; Aberllyn, 11 to 13; Carn Brea, 21½ to 32½; Devon Great Consols, 1½ to 2; Dolcoath, 22 to 24; Clementina, 1¼ to 1½; East Van, 3 to 3½; Leadhills, 2 to 2½; Parys Mountain, 5s. to 7s.; Pateley Bridge, 3¾ to 4¼; Penstruthal, 4s. to 6s.; Roman Gravels, 6¼ to 7¼; Rookhope Lead, 10s. to 15s.; South Condurrow, 10 to 11; South Frances, 4½ to 5; Tankerville, 3¾ to 4; Tincroft, 5 to 6; West Chiverton, 4 to 5; West Tolgus, 48 to 50; Agar, 3 to 3½; Grenville, 1½ to 2; Peevor, 5¾ to 6¼; Wye Valley, 1½ to 2; West Wye Valley, 2 to 2½.

Thursday, Oct. 10.—Market very quiet, and prices about the same as yesterday.

Friday, Oct. 11.—Market inactive, and prices nominal. Van, 17 to 18; Great Laxey, 17 to 18; East Van, 2¾ to 3¼; Roman Gravels, 6¾ to 7¼; Aberllyn, 11 to 13; Clementina, 1¼ to 1½; South Frances, 4½ to 5; South Condurrow, 10 to 11; Carn Brea, 27½ to 30; Dolcoath, 22 to 24; Tincroft, 5½ to 6½; West Tolgus, 47 to 49; Peevor, 5¾ to 6¼.

THE WEEK.

Saturday, Oct. 5.—All the markets showed signs of recovery from the depression brought about by the City of Glasgow Bank failure, but railway stocks were most in favour. North British, Brighton, A, Dover, A, and Great Northern, A, each rose 1*l.* Egyptian Unified advanced ⅝ (56*l.*), but there was not much life in Turkish stocks. The Fives remain at 11¼, and the 1858 issue at 19*l.*, being 11*l.* below the price current a short time back. Devon Consols, 1¾ to 2; East Van, 3½; Kapanga, 1¾ to 1⅞; Richmond, 9½ to 9¾; Don Pedro, 11s. to 13s.; Exchequer, ¼ to ⅜; Eberhardt, 4¾ to 4⅝.

Monday.—Prices of railway stock rose higher. Caledonian advanced to 101½, North British to 89, Brighton, A, to 134¼, and Dover, A, to 125½. A large business continues to be done in Grand Trunk securities, several of which have now reached a price at which they are safe to sell, the 1st Preference being 39¾, and the other two 27½ and 12½ respectively. A telegram was received stating that the Colorado Mine was looking exceedingly well, the result being that the shares fell 10s., being dealt in at 2¾. Exchequer were dealt in at 7s. 6d., and Port Phillip at 12s. 6d.

Tuesday.—Colorado shares touched 2¾, and Richmond closed 9¾ sellers. Tankerville shares were rather offered, and Roman Gravels, Van, and Great Laxey remain dull and neglected. The feature of the day was the headlong tumble in gas securities. Several of the leading companies have recently held their meetings, and at most the new electric light was pooh-poohed by the directors. Many holders, however, appear very anxious to sell even at extreme prices. Some of the issues of the Gas Light and Coke dropped 7*l.*, others 5*l.*, a fall of 7*l.* being recorded in Imperial Continental. London Steam-boat shares gave way ¾, to 6.

Wednesday.—Further sales of London Steam-boat shares were made at prices all below 6, a close price being 5¾ to 5¾. The capital consists of 69,660*l.*, in shares of 5*l.* each, and there is something like 120,000*l.* in mortgage debentures. The shares are chiefly held in town, and by those who go down to the sea in ships. A panic prevailed in gas shares, London and Gas Light fell 12½ each, Continental and Imperial 1¼ each. The "scare" was brought about by a notice in one of the morning papers that as soon as a certain improvement in the electric light is patented and protected gas-meters may be returned to the companies, another new light introduced down the existing household pipes. The quarterly dividend of Great Laxey is to be cut down to 6s. per share. In July 8s. was given.

Thursday.—The markets were flat all day. Brighton, A, Dover, A, and Great Eastern lost ground considerably. There was again a great deal of selling of gas shares. Compared with August (when these securities generally fell in value) Gas Light, A, have fallen 40, Imperial Continental 35, and London 23. A want of confidence was shown among holders of General Credit, Credit, and National Discount shares, all of which were pressed for sale. Port Phillip, 10 to 12s. 6d.; Eberhardt, 4 to 4¼; Javali, 7s. to 9s.

Friday (*Opening*).—Notice is given that the coupons of Egyptian Preference may be left for payment; the bonds are unchanged at 74¾ to 74⅝, Unified being 56½ to 56¾. With the exception of Dover, A—which is up to 123½, 123¾—there is no fresh feature in railways. One or two gas stocks are higher, Richmond, 9¼ to 9¾. Colorado, 2¾ to 3. Port Phillip, 11s. to 13s. Eberhardt, 3⅞ to 4⅛. Kapanga, 1⅝ to 1¾.——*Two o'clock.*—The markets have become flat, Egyptian Preference now being 74, and Unified 56. In railways, Chatham ordinary are down to 25¾, and Brighton, A, to 141½. Gas stocks remain steady. Imperial Continental is 5*l.* higher. Colorado, 2⅝ to 2¾. East Van, 2⅞ to 3¼. Penstruthal, 3s. to 5s. Javali, 7s. to 9s. Ottoman Bank, 8 13 16ths to 8 15-16ths. London Steamboat, 5¾ to 5½. General Credit, 5⅝ to 5¾. Price's Candle, 10½ to 11. Exchequer, 6s. to 8s. Don Pedro, 10s. to 12s. 6d. Wheal Agar, 3¼. Railway Share Trust, 6½. Credit, A, ⅞ to 1. Diamond Rock, ¾ to 1¼. National Discount, 9⅛ to 9¾. Queensland Investment, 1 to 1¼.——*Four o'clock.*—The recovery shown this morning in gas shares has been maintained. Oriental and Bombay each leave off 10s. higher, and both are said to be well worth buying at their present low price. Commercial are 5*l.* higher. Brighton, A, has recovered to 142¼, and Chatham Preference to 87⅛, 87⅜. Bilson and Crump, 2¼ to 3½. Chapel House, 2¾ to 3. Newport Abercarn, 4¼ to 4¾. Alltami, 3 to 3¼.

Ferdinand R. Kirk.

FOREIGN MINES.

ST. JOHN DEL REY.—Telegram from Morro Velho, dated Rio de Janeiro, Sept. 30, received in London Oct. 6, unintelligible, received corrected Oct. 10: Produce ten days, second division of September, 10,750 oits.=4165*l.*; yield, 5·8 oits. per ton = 7·2 oits by old measurement. Water very short.

COLORADO UNITED.—Telegram from Mr. Morgan: September product, cash and ore broken for shipment, $20,000. Mine looking exceedingly well. Screen cloth arrived. Mill working admirably.

DON PEDRO.—Letter from mine captain, dated Sept. 10: The ore has been derived from the following sources—No. 8 shoot below adit level, south side, openings rise from No. 4 stope; 30 fm. level cross cut towards Canoa; rise No. 2 section 49; and a little from Pearce's Pillar, The ore continues to rule of low class, in consequence of the runs made in reprieving No. 2 incline shaft, and the eastern stope south side of openings being in a channel of poor ground.—No. 8 New Shoot, No. 3 Stope East below Adit Level: This stope has been suspended for a few days owing to when the water from No. 8 shoot below the 35 was drained by the 40 cross-cut through a fissure the water washed away the sides of the fissure, being soft ground, under an old pillar of timber built in No. 3 stope in the former setting, on which our last two sets were footed. The pillar gave way, and the south side legs shrunk in the cavity washed out by the water breaking through, and brought the two last sets together, and caused a general shrinkage at this point. The stuff and timber choked the hole or passage again, and it was thought advisable to suspend this until by getting in back laths in the 40 cross-cut the stopes could be again drained, which was effected on the 9th, and as the water emitting from No. 6 shoot and Canoa stopes is now taken up in launders we hope to be able to prevent another breakage, and press on this stope as speedily as possible.

No. 4 Stope East, below Adit Level: The branch in this stope fully maintains its size and character—progress fair. In the rise from No. 4 stope the branch southward is increasing in size, and maintains its favourable appearances.—Pearce's Pillar: Progress at this point continues slow, owing to old timber to be cut out, &c. A portion of the 30 fm. level cross cut was crushed by the run, or crush below, in the No. 3 stope, and has been suspended until the crush below is secured. —South Side Openings from Western Stopes: The stope eastward is disordered by a channel of poor ground, which we hope to get through shortly. Ore from this point has been of low class.—Rise No. 2: Section 49: The branches in the eastern stope from the rise are small in size, of moderate quality, and dipping on a very stiff angle. The branch in a stope opened north from rise is of moderate quality, though of small size.

Prospective and Running Works: The 40 fm. level Cross-cut: This cross-cut drained the No. 8 stopes on the 5th by cutting a fissure of larger size than the one reported on before, and the water brought down, or washed down, a large quantity of fine jacotinga, showing gold, but of very low class, and caused a good deal of trouble to the drawing-lifts, &c., the large quantity of old timber and debris in No. 8 shoot choked the waterway, and on clearing the stuff washed down the back laths were driven to full extent for another set, and some side laths got in; by driving the lath caused a motion in the ground, and on the 9th the water broke through again, and No. 8 shoot is drained; the fine jacotinga washed out in these breaks gives trouble, but fortunately by catching the sand with "stop board" we saved the 10 in. lift from "starving," and the 8 in. lift is out of danger of "starving." We hope with care to prevent another chokage, to enable us to secure No. 3 stope or No. 2 incline shaft, but this cannot be relied on. The ground in the end is still hard for driving, and the water came down between the back laths, so this is in our favour for prosecuting the cross-cut.

Incline Sump Shaft: The whim side holed to the 40 fm. level, and is being timbered and secured preparatory to opening out a plat for convenience of transit of stuff, &c., from the 40 cross-cut. Two sets put in and lathed over cistern of plunger-lift, as the former timber was crushed badly, and preparing to put two sets more just below to make this point as strong as possible.

No. 2 incline shaft is still undergoing repairs. In lathing the back a run took place from an old stope adjoining, and as it showed gold, though of low class, it was treated; this, though not decreasing the gold, yet militated to the standard of the ore generally. In No. 8 shoot, below the 35, the water in breaking through the fissure on the 5th current caused by its rapidity a general movement, and some old laths falling injured the launders which carry No. 6 shoot, and Canoa water across No 8 stopes, through the 35, and as all the timber was more or less shaken it was unsafe to meddle with them for a short time, as after chokage the water might break through and endanger men's lives if placed here to repair them, but on draining these stopes on the 9th we had them repaired, and the water from these points taken up. The stopes are dry to date, but a large amount of sand and debris is accumulated in the various stopes, which if we can prevent another chokage will shortly be cleared and secured. In No. 1 stope east, below the adit level, the pillar commenced under and around the rise, section 69, is completed. In No. 4 stope east a large pillar commenced under the rise from this stope for footing in stoping away the branch above. In the south side openings six props are put in.

Bawden's cross-cut is undergoing repairs at intervals. The cross-cut from Symons' shaft to Alice's West is still in hand. In Symons' shaft there are 23 sets and 23 dividings put in, and the shaft is now in fair condition. Harry's cross-cut is undergoing repairs. In Vivian's shaft the south side is being filled with debris. The 60-ft. wheel since repaired worked on remarkably well until the 7th, when the north side flange joint began to fail. The smiths are preparing iron work to repair this joint on the same principle as the south side is secured. So far nothing can be more satisfactory than the state of the south side flange-joint of axle, and we hope to put the north side joint in good repair on the 12th, when we hope the iron work for the same will be completed. One role changed in the mine. Bushing of the plunger-pole shifted bottom part up as it was worn through; pole packed; 10-in. bucket changed 10 times, and 8-in. ditto twice.—Reduction: One new frame set put in to support launders across the gulley near the washhouse, and two supporters put under another set adjoining, and bolted with four 1-in. bolts. The mine wagons being worn out and past repairing, a new wagon is in hands and nearly completed. The old wagon, although filled in the mine, by the time of delivery loses at least one-fifth of the contents at starting, and for want of force not being able to clean up between the road in the adit level as heretofore, militated somewhat to the discrepancy of the gold returns to the mine standard.

RICHMOND—R. Rickard, Sept. 18: During the past week explorations have been carried on vigorously, and with very good results. The drift south from incline has been extended 30 ft. in good ore, making a total of 85 ft., 75 ft. of which is in ore. The drift north from incline has been extended 27 ft., making a total of 44 ft., 30 ft. of which is in good ore. The rise in back of the south drift from incline is up 32 ft. in good ore, and the winze below same is down 8 ft. in good ore. A rise has been started at the foot of the incline to follow the ore; it is now up 15 ft, in fair grade ore. The winze sinking below the 500, on fissure, is down 65 ft, with very good ore indications in the bottom. There is no change in the different drifts and winzes since last reported on. The machinery for the air-compressor has arrived, and we began to-day to put it in place, and I hope to get it at work in the course of about two weeks.

LUSITANIAN.—Oct. 5: Pallal: Levels on Basto's Lode: The lode in the 200, east of Taylor's shaft, is 4 ft. wide, and worth 1½ ton of ore per fathom. The 200 west is 4 ft. wide, and worth 3 tons of ore per fathom. The 190 and 180 east are each 5 ft. wide, and producing stones of ore. The lode in the 150, west of slide lode, it 4 ft. wide, and worth 2 tons of ore per fathom.—Stopes in Basto's Lode: The two stopes above the 200, east of Taylor's shaft, are worth 5 tons each for the month. The three stopes west of Taylor's shaft, above the 200, 7 tons each. The stope east of Taylor's shaft, above the 190, 5 tons. The stope above the 180, east of Taylor's shaft, also 5 tons.

PESTARENA UNITED.—Oct. 7: District Val Toppa: In the end south of Zero level, on the caunter branch, we have a branch about 4 in. wide, spotted with pyrites; as yet it is of no value, but looks promising.—Western Part of Great Quartz Lode, Intermediate Level under Zero: After communicating the winze to the rise in the back of No. 1 level, we drove the intermediate end north; the lode is yielding 4 tons per fathom, worth 7 dwts. per ton. The stopes in the back, behind this end, yield 5 tons per fathom, worth 12 dwts. per ton. In the end south the lode is small, but at present not to value. The stopes in the back behind this end, or north of winze coming from Zero, are yielding about 12 tons per fathom, worth 8 dwts. per ton.—No. 1 Level: In the end south the lode is yielding 5 tons per fathom, worth 3 dwts. 4 grs. of sponge gold per ton. In the drive on western branch, above this level, the lode is yielding 2 tons per fathom, worth 4 dwts. 20 grs. per ton.—No. 2 Level: The stopes in back, south of 2nd cross-cut west, are producing 9 tons per fathom, worth 7 dwts. per ton. In the south end of this level the lode is small, and at present not to value. Under this level, in the south end of winze, reached last month, we have a stope giving 8 tons per fathom, and worth 9 dwts. per ton. In the intermediate end south, under No. 2 level, the lode is yielding 6 tons per fathom, worth 8 dwts. per ton.

Great Quartz Lode—No. 2 level: In the end north of the 4th cross cut, on the eastern part, the lode gave 9 tons per fathom, worth 3 dwts. per ton; this end, being now communicated to the No. 5 cross cut, we intend putting the men to cross-cut through the great lode further north in order to prove the eastern part there: The lode in the end, south of 1st cross-cut, on the supposed line of this lode, is yielding 9 tons per fathom, worth 8 dwts. per ton.—Intermediate Level, under No. 2 Level: In the stopes north we have a lode yielding 12 tons per fathom, and estimated to be worth 14 dwts. per ton.—New and Flat Lodes—No. 2 Level: The stopes south of the 1st cross-cut, on the continuation of the flat lode, are yielding about 12 tons per fathoms, worth at present 17 dwts. per ton. In the winze north of the 4th cross-cut, on the new flat lodes, the lode is yielding 10 tons to the fathom, worth 7 dwts. per ton.—No. 3 Level: The lode in the rise over the 1st cross-cut westward is yielding about 7 tons to the fathom, worth 5 dwts. per ton.—No. 5 Level: The ground in the end of the cross cut westward continues to be of the same promising appearance.

District of Pestarena.—100 fm. level: In the end north the lode is yielding 2½ tons of ore per fathom, worth 1 oz. of sponge gold per ton. The lode in the end south is yielding 5 tons of ore per fathom, worth 15 dwts. per ton.—90 fm. level: No. 1 stope in back north is yielding 7 tons per fathom, worth 1 oz. 16 dwts. per ton. No. 2 stope is yielding 3 tons per fathom, worth 18 dwts. per ton. In the end of No. 1 stope, south of incline, the lode is yielding 2 tons of ore per fathom, worth as per mill trial 3 ozs. of sponge gold per ton. No. 2 stope, in back of the 90 south, is yielding 2 tons of ore per fathom, worth as per mill trial 3 ozs. of gold per ton. No. 3 stope is yielding 3¼ tons of ore per fathom; a mill trial gave 3 ozs. per ton. No. 4 stope, yielding 4 tons per fathom, is worth 1 oz. 14 dwts. per ton. In the winze behind the south end the lode is yielding 3 tons per fathom, worth 2 ozs. 13 dwts. per ton.—80 fm. level: The lode in the end north is at present unproductive. The stope in the back of the 70 north is yielding 3 tons of ore per fathom, worth 1 oz. per ton.—65 fm. level: No. 2 Lode: The lode in the end, south of cross-cut, is unproductive at present.—55 fm. level: In the end north, driving under the Acquavite, on the No. 1 lode, the lode is yielding 3 tons of ore per fathom, worth 7 dwts. per ton. No. 1 stopes, in the back of this level, are yielding 6 tons per fathom, worth 9 dwts. per ton. No. 2 stopes are yielding 5 tons per fathom, worth 9 dwts. per ton. No. 3 stopes, 4 tons of ore per fathom, worth 1 oz. 9 dwts. per ton.

Acquavite Department: In the end north of the old 55 the lode is yielding 6 tons of ore per fathom, worth 13 dwts. per tons. The stope in the back of this level south is yielding 3 tons per fathom, worth 13 dwts. per ton. The lode in the 33 north is yielding 1½ ton per fathom, worth 10 dwts. per ton. The stope in the back of the 23 north is yielding 6 tons per fathom, worth 1 oz. per ton. The work connected with the new ditch is progressing, and we hope to finish the mining and masonry this month.

VIRNEBERG (Copper).—R. K. Roskilley, Oct. 9: Setting Report: We set the following bargains on the 3rd instant.—Hadley Engine Shaft: The 140 metre level to drive south of cross-cut, south of engine-shaft, to three men, at 55 marcs per metre; the lode is 4 ft. wide, and yielding good stones of copper ore; this level is driven 6 metres 4 centimetres south of cross cut. The 140 to drive north of ditto to three men, at 70 marcs per metre; the lode in the end during the past few days is improved for copper ore, and is worth 20*l.* per fathom; here we are opening up a fine piece of available ore ground; this level is driven 2 metres 20 centimetres north of cross-cut. To clear and secure the rise in back of this level to six men, at 20 marcs per metre; the clearing of which is being pushed on with vigour in order to communicate with the winze sunk below the 120; when this is effected it will not only give good ventilation in this part of the mine, but will enable us to stope away the copper ore already laid open in this rise. To stope the back of ditto, south of rise, to six men, at 18 marcs per metre; the lode is worth 15*l.* per fathom for copper ore. The 120 metre level to drive south of shaft to six men, at 70 marcs per metre; the lode within the past 6 ft. driving has much improved, it being 4 ft. wide, and worth for copper ore 12*l.* per fathom; this end was extended during the month 5 metres 40 centimetres.

No. 1 stope, in the back of this level, to six men, at 30 marcs per metre; lode worth 30*l.* per fathom. No. 2 stope, in the back of ditto, to six men, at 30 marcs per metre; lode worth 10*l.* per fathom. No. 3 stope, in the back of ditto, on the footwall of the lode, to six men, at 40 marcs per metre; the lode is worth 7*l.* per fathom. To stope the back of this level, north of engine shaft, to six men, at 30 marcs per metre; the lode is worth 15*l.* per fathom. The 90 metre level, to drive north of rise, at 45 marcs per metre; the lode is 4 ft. wide, and producing good stones of copper ore. To stope the back of this level, north of shaft, to four men, at 45 marcs per metre; the lode is worth 8*l.* per fathom for copper ore. To stope the back of the 90, north of rise, and north of engine-shaft, to six men, at 16 marcs per metre; the lode is worth 9*l.* per fathom. We are busily engaged in carting the copper ore to the Rhine (Mühtenweg), and to-morrow I am expecting the Rhine-chaft, which I have engaged at 3¾ guilders per last of 40 cwts. Immediately the boat arrives she shall be loaded as as to leave for Rotterdam. All our surface work is going on most satisfactorily, as well as the dressing of copper ore, and I have much pleasure in stating that the mine continues to open up remarkably well.

CAPE COPPER.—Capts. Lanksbury and Henwood, August 31: The 92 fathom levels, east and south east from No. 23 winze, have not undergone any change to notice since last report. No. 29 winze below the 80 has now reached a depth of 7 fathoms, and for the first 5 fms. 3 ft we had a very rich bunch of copper ore, but below that depth it gradually became poor; the present bottom is in quartz rock; there is still a chance of its making again. In the 80 south, from No. 21 winze, the ground is not looking quite so kindly for copper ore as when we last reported, but we shall push on this level, as it is a good trial in that direction. In the 80 south-east, from No. 19 winze, we have a little improvement in driving, the ground producing a few stones of copper ore. There is no change to notice in the other trials at this depth. The cross-cut south, in the eastern extremity of the 68, has fallen off a little in value; the present end is worth 3 tons of copper ore per fm. The 68 east, from under new shaft, has during the past month yielded saving stuff. The present forebreast is rather poor. There is no change to notice in the 48 east, from No. 14 winze; the ground is impregnated with copper ore throughout, but not enough to value. The stopes throughout the mine produce and look well, yielding fully their estimated quantities. It will be seen we are making good progress in the 26 north-east, from new shaft; the ground is still very kindly, and has produced a little copper ore. Trial shaft below old workings, south from engine-shaft, has yielded a little copper ore during the past month; as the ground is in a disordered state we purpose to sink 5 fms. deeper before we drive cut levels from the bottom of shaft. We are getting on very well on the dressing floors, and the Kaffirs are giving great satisfaction; we think after they are fully acquainted with the work they will become valuable labourers.

Spectakel.—Capts. Lanksbury and Henwood, July 25: The ground in the cross-cut south-east from flookan course at the 53 fm. level has during the month been rather spare for driving. The winze below the 27 fm. level, on joint east of flookan course, produces a little copper ore. Apparently the ore ground here is taking an easterly direction, as the stope east near bottom of winze is still worth about 3½ tons per fathom. In order to expedite the communication between this point and the 53 fathom level, and seeing that the ground can be taken away more advantageously afterwards, we have deemed it necessary to suspend this stope. The stope in the bottom of the 36, east of flookan course, has improved.—Capt. Henwood and Capt. Lanksbury, Aug. 25: Tolerably good progress has been made in the 55 cross-cut south east from incline. The ground in the winze below the 27 on the joint east of flookan course has become harder for sinking, but we hope in a short time to hole this piece of ground, when we shall immediately resume stoping. The stope in the bottom of the 36, east of flookan course, is now producing a large quantity of stuff for the dressing floors.

Nababeep Mine.—Capt. Henwood, Capt. Lanksbury, Aug. 15: The ground in the whim-shaft is favourable for sinking. We have not met with any copper ore in the 28 south-east from shaft. The winze in the bottom of 17, south west from shaft, was commenced and sunk to a depth of about 5 ft. in good ground, producing about 4½ tons of copper ore per fathom; it then gradually fell off in value. The present bottom is again more promising, and produces some good stones of ore. Good progress has been made in the 17 south, but the ground having become less congenial for copper ore, we thought it best to suspend this end for the present, and resume driving the 20 south-west. Our two stopes are looking tolerably well.

Returns for August: Ookiep, 975 tons of 29 per cent.; Spectakel, for June an July together, 30 tons of 32 per cent.; Nababeep, for June and July together 30 tons (assay not yet received).—Bills of Lading Received: 18 tons of ore per Teuton (s); 355 tons per Argo; 600 tons per San José; and 600 tons per Tacna.—Sale of Ore by Public Tender: On September 18, 680 tons, at an average of 11s. 9d per unit, realising approximately 12,350*l.*—Put Forward for Sale: 245 tons on the 9th instant.

LINARES.—Oct. 2: In the 120, east of Santa Tomas, there is a large and stron lode spotted with ore. The lode in the 135, east of Santa Tomas, contains spots o ore, but not enough to value. In the 135, west of Santa Tomas, the lode is without ore. The lode in the 100, east of Warne's, is not so productive and promising as it was, but still valued at 1 ton per fathom. In the 115, east of Warne's, there is no improvement to note. The lode in the 115, west of Warne's, has declined in value of late; it is still easy for driving through, and worth ¾ ton per fathom. In the 120, east of Peill's, a great length of good lode was opened in the past month; it is not so productive at present, yielding 1 ton per fathom. The lode in the 90, west of Peill's, is well defined and regular, producing 1 ton per fathom. In the 120, west of Peill's, a good length of valuable lode is being opened up, valued at 1½ ton per fathom. The lode in the 105, east of San Francisco, is improving, and in the upper levels there is a fine lode in advance of it worth ½ ton per fathom. In No. 225 winze, below the 90, the lode is diminishing in size and value, now worth 1 ton per fathom. No. 226 winze, below the 105, is going down in a fine lode, yielding 2 tons per fathom.—Quinientos Mine: The 100, west of Taylor's, is suspended for the present. The 100, east of Taylor's, is again unproductive. From the 90, east of Taylor's, the men are driving north, where we expect to intersect the principal part of the lode. In the 80, east of San Carlos, the lode is large and strong, with stones of ore. Gomez winze, below the 90, is going down in a good lode, and will be holed to the 100 shortly, producing 1 ton per fathom. We estimate the raisings for October at 100 tons.

FORTUNA.—Oct. 2: Canada Incosa: The lode in the 120, west of O'Shea's, is large, and yields splendid rocks of ore; worth 1½ ton per fathom. In the 50, west of Abercrombie's, the lode is small, and does not contain ore enough to attach a value to. The lode in the 60, west of Abercrombie's, is a little more regular, but is still destitute of ore. In the 50, east of Abercrombie's, a fine length of good ore ground is being laid open, yielding 1½ ton per fathom. The 70, west of San Pedro, continues unproductive. In the 80, west of San Pedro, the lode is of a kindly character, but is not producing ore enough to value. The lode in the 80, east of San Pedro, has fallen off in value during the past few days. In the 70 fm. level, east of San Pedro, the lode is regular and well defined; yielding ¾ ton per fm. The lode in the 120, east of O'Shea's, is smaller, and the ground very hard; worth ½ ton per fathom. In the 100, west of Lowndes', some fine rocks of ore were broken during the past week; it is not now so good—valued at ½ ton per fathom. In the 100, east of Lowndes', there is a good store of ore in the bottom of the level; the upper part is poor. In the 90, east of Caro's, an improvement has taken place in this drivage; lode looks well—producing 1 ton per fathom. Pablo's winze below the 50 has reached the level below. Diego's winze below the 110 is going down is a regular and productive lode worth 1 ton per fathom. In Congress winze below the 6 the lode has slightly declined in value; it is now yielding ¾ ton per fathom. Martinez' winze below the 30 fm. level is being sunk on the 40, west of Abercrombie's shaft.

Los Salidos.—In the 145, east of Taylor's, very good progress is being made in this end; lode not so good, valued at ½ ton per fathom. The 130, east of Taylor's, is being driven through a long and hard bar of sterile ground. In the 120, east of Cox's, the lode is smaller and the ground much harder than for some time past; valued at ¾ ton per fathom. The 110, east of San Miguel, is opening a very good length of productive ground, worth 1 ton per fathom. In the 80, west of Palgrave's, the lode is split into branches, and is of no value. In the 80, east of Palgrave's, very good ground is being laid open, and it is easy for driving, producing 2 tons per fathom. Taylor's shaft, below the 145, is being sunk at a rapid rate. The lode in Nieve's winze, below the 65, has fallen off in value in the past few days; ground easy, valued at ¾ ton per fathom.

ALAMILLOS.—Oct. 2: The lode in the 20, west of San Felipe shaft, contains good stones of ore. In the 100, east of Taylor's, there is a large and strong lode, spotted with ore. The lode in the 100, west of Taylor's, is yielding good stones of ore, but not enough to value. In the 85, west of San Adriano, there is no improvement. The lode in the 60, east of San Victor, is open and very easy for driving. In the 70, east of San Victor, the lode is changeable, and at present unproductive. The lode in the 70, west of San Victor, is much improved, worth 1 ton per fathom. The 60, west of San Victor, is suspended for the present. In the 40, east of San Victor's cross-cut, the lode is small and irregular, but yielding ½ ton per fathom. On opening the south side of the 30, east of air shaft, we found the principal part of the lode; it contained good stones of ore. The lode in the 30, west of air shaft, is in contact with the main slide. The 40, south of San Carlos, has not yet reached the lode, although it is very long. In the 40, east of Judd's, the lode has fallen off in value, but still worth ¾ ton per fathom. The 50, east of Judd's, is less productive than it was, now worth 2 tons per fathom. In the 70, west of Judd's, there is no improvement. The men are getting on very well indeed with the sinking of Taylor's engine-shaft below the 100. The lode in Hidalgo's winze, below the 85, is large, but not so productive as it was, now valued at ¾ ton per fathom. In Ortiz' winze, below the 40, the lode is very changeable; last week it was very rich, now worth ½ ton per fathom. The lode in Pascual's winze, below the 20, is small and regular, yielding ½ ton per fathom. In the Gigante's winze, below the 60, the lode is hard and reduced in value. Carmona's winze, below the 85, is being sunk at a good rate, and the lode was good during the past month, yielding ¼ ton per fathom. The lode in Ciro's winze, below the 30, is not so productive as it was, worth ½ ton per fathom. The usual quantity of ore was returned in the past month, and the stopes have not undergone any change of importance. The ordinary work at surface is kept on with regularity, and the machinery is in good condition. We estimate the raisings for October at 175 tons.

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—S. Toy, Oct. 9: The deep adit cross-cut is now driven north 7 fathoms 2 feet, where we have met with a hard bar of ground and full of joints, which for the present makes our progress slow, but we are hoping that this will not continue long.

ABERLLYN.—J. Roberts, Oct. 9: We have now cleared the cross-cut at the deep level for a distance of 10 fms. beyond that shown on the plan, and have come to another level on the right hand, which is driven on a part of the shale, and I expect that this is the shale which is next to the lode in the No. 2 or middle adit. Of this I shall be able to say more next week, when we shall have cleared more on it. The blende lode in No. 2 adit is looking well, with good stones of lead in it. At No. 1 on the shallow adit we are opening the level to sink a winze down on the blende, and it appears now that we are on the face of the blende lode, as good blende is making its appearance. The contracts at surface are being pushed on with all speed, and will be completed within the time specified.

ASHBURTON.—George Rickard, Oct. 1: In the 50, east of boundary shaft, the lode indicates improvement. No. 1 pitch, over the 50, is now worked up to the level above. No. 2 pitch continues to yield a fair quantity of ore. The pitches in the bottom of Browne's are suspended for the present. The tributers are working other pitches. There is no important change to notice in No. 1 pitch, over the 50, west of Mawr's. The men put to drive the 50 south of Mawr's are still engaged in clearing that level of deads, preparatory to doing so. Nos. 1 and 2 pitches, in back of the 20, on north and south lode, are looking as well as usual. No. 1 pitch, below the 8, at Gundry's, looks very promising. The 20, south of Mawr's, has to be driven 12 to 15 fms. more to reach these workings. We have four men engaged in this level clearing it of deads, &c., and securing such portions of it as may require the same, preparatory to driving. There are about 12 to 15 fms. more to drive in order to reach Gundry's shaft, which, when done, will ventilate this level and working's, as well as open up, it is expected, valuable tribute ground at those points which are now lying dormant; and the extension of this level south has good prospects of opening extensive tribute ground in the backs, and also making good discoveries south of Gundry's. We have several pitches working in the bottom of the adit level, north of Lindow's, which are yielding, upon the whole, about 20 tons of lead per month; and, as far as I can now ascertain, the general character below, as far as seen of the lode, is lead-bearing in sufficient bulk to set on tribute. Under these circumstances, the scope of ground being great, a large yield of ore would be the result of properly working this ground. I consider it would be wise to at once put a lift in Lindow's shaft to drain the water, for the present, at least, as deep as the 10, in order that the ore below the adit could be taken away more economically. The sinking of Lindow's shaft could be considered afterwards. In order to get away the ore raising in connection with this shaft it was found absolutely needful to erect a horse-whim, which has been done and set to work; the collar of shaft, which was in a bad state, secured, &c. Gundry's shaft has also been repaired and put in order for winding, so that now we are using both Gundry's and Lindow's for winding.

BEDFORD UNITED.—R. Goldsworthy, Oct. 9: The engine shaft sinking below the 138 is down about 9 fathoms, where the lode and south branch have formed a junction, indicating the lode to be very large; the part being carried is 2 ft. 6 in. wide, and worth for copper and mundic 10l. per fathom. The lode in the 138 east is 3 ft. wide, composed of capel, spar, mundic, and copper ore, and worth for the latter about 6l. per fathom. The lode in the 127 east is fully 4 ft. wide, producing good stones of ore, and from its promising appearance I expect further improvements on being extended east. Two stopes, one in the back of the 138 east, and one in 103 west, are worth on an average 7l. per fathom.

BETTWS-Y-COED.—H. T. Haley, Oct. 7: There is no particular change to notice underground since my last, the different points maintaining their value. At surface the work is being pushed forward with all possible dispatch. The masons are putting on slates on crusher house and engine-house, and pointing crusher-wheel pit before commencing pumping wheel pit, so as to have shelter for carpenters when rough weather.

BLAEN CAELAN UNITED.—J. Pell, Oct. 7: Since my last report the engine-shaft is completed to and sunk 1 fm. 3 ft. below the 30. The 30, east and west from winze, continues in good lead, with copper; worth for lead 20l. to 25l. per fathom. The cross-cut from engine shaft is not yet into the lode. Have arranged timber for dividing engine shaft from the 20 down to the 30. Shall drop the pumps from deep adit to the 30, and put the new lift from deep adit to the 10, as there is very little water below this level. Have not made progress with dressing; various alterations have been made, and all our arrangements will I think be first-rate. With the present low price of ore there is no object in pressing sales so long as we can defer doing so, and I hope the ore we dress from sinking and driving levels will be allowed to accumulate in the ore bin. The repairs to and raising embankment of reservoir, coupled with our new water course, afford us a capital supply of water.

BLUE HILLS.—S. Bennetts, P. Bennetts, Oct. 5: The 80 east end on the main lode is worth from 6l. to 7l. per fathom. The 30 east end on the north lode is worth 10l. to 12l. per fathom; a most promising end, and opening out some good paying ground. A skip road has been just completed in the Blue Burrow shaft to the 12, where a plat has been cut to facilitate the sinking of the shaft so quickly as possible to communicate with the 30 east end.

BODIDRIS.—H. Hotchkiss, Oct. 9: We are making good progress at all points of our underground operations. In the winze sinking in the bottom of the 60 the ground has become stronger; the lode is a little wider, and more promising for producing lead ore. In the 45 on the middle lode the men are still rising up to meet the new shaft, and the shaftmen are busy sinking, and are making good progress. I calculate we have about 10 ft. more to cut so as to communicate these two points. No change in the stope in the bottom of the 30. On the surface we have the engine ready for working, and the new rope has been delivered on the mine. Thr pit-frame, pulley-stands, &c., are all in readiness to be erected. We are only waiting for a sheave for pit-head. This I expect to have in a few days, when no time shall be lost in getting all in working order. In the meantime I am urging on the sinking of the shaft, so that if possible I may communicate this with the level before we commence to divide the shaft.

BWLCH UNITED.—N. Bray, Oct. 8: The lode in the stope in the 60 looks well, and should it continue as at present will lay open a valuable piece of ore ground, in which it is probable a winze will be required for ventilation and for further exploration. The shaftmen are going down very steadily, and, as before reported, the sinking is by the side of the lode. Air-machine and pipes are being fixed from the 70 to the 80 for improved ventilation; this shaft now requires a lift of pumps, which will be taken from the old engine-shaft, which is now being drained for that purpose.

CARON.—John Kitto, Oct. 5: Since the date of my last report we have resumed the sinking of the new engine-shaft below the 10, and I scarcely need say every exertion will be made to get it down to the 22 as quickly as possible, where I purpose driving out for a new level on the course of the lode. The stopes in the back of the 10 have continued to yield very good ore during the past month, but the one nearest the new engine-shaft seems to shorten in going up towards the adit level, but this goes, so far, to prove that it will be found to lengthen in going down. We have commenced a new stope in back of the adit level, which is looking very well, and yielding ore in paying quantities. The new machinery has been set to work and is doing well, and the dressing of ore commenced, and if no mishap occurs, which I do not anticipate, we shall soon have a parcel of ore ready for market.

CLOGAU.—W. B. Davies, Oct. 1: Report for September: We continued to obtain gold at the commencement of the month from No. 7, and are still in bismuth. A change may again be expected here shortly; its nature it is impossible to predict at present.—Branch Lode: The level has been driven 3 fms. 3 ft. west, and producing visible gold; there is now 5 fms. in length on the shoot from above opened out by this level. We have removed the men from the 5 fm. level, west of engine-shaft, for the month, in order to push forward the branch level, after finishing which we propose to continue work here. Two men have been put in the deep workings to try the old stope in the back of the 15, where gold was reported to have been found; nothing has been found, but the ground is sufficiently promising to induce us to continue prospecting.—Reduction: The Britten pans worked 1258 lbs. of ore, which yielded bars of gold weighing 69 ozs. 12 dwts. 19 grs.

CLEMENTINA.—J. Roberts, Wm. Sandoe, Oct. 9: We are forking the water now below the 15 with the small wheel by using the spare water. The pit for the large wheel is progressing favourably.

COMBMARTIN.—T. Harris, T. Comer, Oct. 5: The 15 to drive east of Hardis's shaft, by four men, at 4l. per fathom the month; the lode is still large, and showing a little lead and blende. The adit cross cut to drive north, by four men, at 5l. 3s. per fathom the month. Within the past week we have intersected some nice branches of quartz containing good spots of lead and blende, which lead us to think we are approaching another lode. The adit level to drive south east on the caunter lode, by two men, at 3l. per fathom the month; the lode is large, and in which we find little branches of quartz containing fine lead, but not enough to value. The adit level to drive north-west on caunter lode, by two men, at 3l. per fathom the month; the lode is also large, and of a promising character.

CWMYSTWITH.—Oct. 9: Good progress has been made in driving Michell's cross-cut north during the past week, but no lode has yet been met with; from the bearing of the lode when seen in a brook about 180 fathoms east of the line of the cross-cut it should have been reached, but a slight variation in the bearing or underlie of the lode in the above distance would give us a few fathoms more to drive. In the cross-cut, north of Gill's upper level, the men have cleared and secured the old level, and have commenced driving the same. The lode in the two stopes over Gill's upper level is 3 ft. wide, and worth 18 cwts. of lead ore per fathom. The three stopes on the new lode over Michell's level are producing 16 cwts. of lead ore per fathom. In the stope over Level Fawr on the copper lode very little has been done during the last fortnight, as the men have been engaged assisting carpenter and smiths repairing Kingside drawing machine. No change in any of our tribute pitches. Since our setting day we have set a pitch below Level Fawr on the copper lode to four men, at 5l. 15s. per ton, but it is rather poor. The repairs of our Kingside drawing machine are complete, and we are now drawing our tribute stuff. All our machinery is now in fair working order, and 10 tons of lead ore were weighed into the bin last week towards our next sampling. Samples of 38 tons of lead ore were sent out on the 1st inst., for sale on the 15th.

DE BROKE.—S. Phillips, Oct. 9: At the 55 we are opening a lodge; the lode so far as yet seen is composed of light killas and quartz branches, but the south wall has not been reached. The lode in the 45 east is 4 ft. wide, producing large masses of sulphur, quartz, and spots of copper. The drift east, below the 25, yields stuff for dressing, with good stones of solid ore. The 25 east has been suspended, and the men with some others placed to stope the back, where the lode looks promising, and is yielding about 30 cwts. of lead ore per fathom. The stopes at the 45 are not looking as well as usual just now, but as the lode is wide and masterly I think the falling off is temporary, judging from the nature of the lode going below the 35. The stope in the back of the 35 east is worth about 20 cwts. of ore per fathom. The machinery, pitwork, and dressing apparatus are in good order, and I intend sampling 30 tons of ore at an early date.

D'ERESBY CONSOLS.—John Roberts, Wm. Sandoe, Oct. 9: There is a great change in the ground driving towards Cobbler's lode. A large vugh has made its appearance in the footwall, extending from the sole to the roof of the level, and considerable progress will be made whilst this continues. We may add that there is a large quantity of water issuing from this vugh, which is a good indication of lead before us.

D'ERESBY MOUNTAIN.—J. Roberts, Wm. Sandoe, Oct. 9: We have nothing new to report since last week. We have got through the choke at No. 5, and as far as we can see we have hard sides, and nothing but the stuff to clear, which is nearly to the roof of the level. We will send you a detailed report next week.

DENBIGHSHIRE CONSOLIDATED.—R. Prince, A. Francis, Oct. 11: We are pleased to be able to report that at the bottom of the 66 west a fine discovery has been made, the ore being solid, and yesterday we drew therefrom over 2½ tons of lead. The appearances are splendid.

DEVON GREAT CONSOLS.—I. Richards, Oct. 11: Wheal Emma: Inclined Shaft: In the 137 east, west of Friends' cross-cut, the lode (5 ft. of which being carried) is composed of very fine capel, quartz, peach, prian, mundic, and some good quality copper ore, and is altogether of great promise.—New Shaft, New South Lode: In the new shaft, below the 190, very fair progress in sinking is being made; a portion of the lode, 1½ ft. wide only, on the north, being carried, is composed of capel, quartz, mundic, and some good quality copper ore. In the 190 east the lode, part carrying 5 ft. wide, consists of very fine capel, quartz, peach, prian, copper ore, and mundic; worth of the former 2 tons or 6l., and 4 tons mundic per fathom. In the 190 west the lode, part carried 7 ft. wide, is composed of very fine capel, quartz, peach, prian, and copper ore; worth 4 tons or 12l., and 7 tons mundic per ton. In Floyd's winze, in the bottom of the 175 east, the lode, part being carried 5 ft. wide, is worth for length of winze (9 ft.) 6 tons copper ore or 12l, and 6 tons mundic per fathom. In the 175 west the lode is 5 ft. wide, and worth 3 tons copper ore or 9l., and 4 tons mundic per fathom. In Hockaday's winze, in the bottom of the 175 west, the lode is 5 ft. wide, and worth for length of winze (9 ft.) 2 tons copper ore or 6l., and 3 tons mundic per fathom. In the 130 east the lode is 3 ft. wide, composed of capel, quartz, mundic, and some copper ore of good quality. This point of operation is about 25 fms. west of Friends' cross-cut, at the 137, east of the inclined shaft, where this, the new south lode, has been recently intersected and cut through, and on the course of which a level is now being extended west. It being very desirable that a communication should be effected between these points, both for exploring this very fine and promising lode, and for securing good ventilation in this part of the mines, it is intended to push on these levels with as much dispatch as the nature of the ground will admit of. At the Railway shaft, on the new south lode, the men are engaged cutting ground for skip-road and putting in penthouse, preparatory to sinking below the 160. The sinking of this shaft, which has been kept in abeyance for some time, is resumed, for the purpose of getting down into the run of ore ground which is being laid open at the two lower levels, the 175 and the 190, west of the new shaft; and judging from the very fine indications at these points of operation, we hope to be successful here also as increased depth is reached.

EAST CHIVERTON.—Richard Southey, Oct. 10: Since the last general meeting of the shareholders the different points of operations are being pushed forward with all possible dispatch. The lode in the 74, west of engine-shaft, is got within the last few feet driving exceedingly large, and a little disordered; but yesterday there was a decided change for the better; the lode appears to be coming back to its usual size—3 ft. to 4 ft. wide—and producing some splendid lumps of silver-lead ore, at the same time letting out a larger quantity of water than I have ever seen before. I am highly pleased with the character of the lode, and I fully believe in another level we shall find a continuous course of ore. No change as yet in the 64 cross-cut south; ground still hard. Active operations will at once be commenced to change our pitwork, and when completed we shall resume the sinking of the engine shaft below the 74.

EAST CRAVEN MOOR.—D. Williams, Oct. 10: The new shaft from surface has been sunk during the month 2 fms. 4 ft. 6 in. in a vein 4 ft. wide, composed chiefly of spar, barytes, and branches of lead ore of fine quality, worth 20 cwts. per fathom. The cross-cut south to the parallel veins is extended 10 fms. south of the 42 fm. level; driven during the month 4 fms. The 30 west is extended 35 fms.; this level is at present being driven south-west, to intersect the main part of the vein heaved south by a cross vein. In the 51 the ground is spare for driving; vein 2 ft. wide, and producing patches of lead ore. On surface we hope to commence tramming ore stuff from the shaft to the dressing floors on Monday next.

EAST DARREN.—Oct. 9: In the cross cut south at the 92 east the ground is composed of clay slate, and much easier for driving. In the 92, east of cross-cut on No. 1 branch, the lode is 3 ft. wide, yielding saving work for dressing. In the 80, east and west of cross cut on No. 2 branch, the lode is from 2½ to 3 ft. wide, yielding on an average 12 cwts. of lead ore per fathom. Richards' winze under the 80, west of cross-cut on junction, is down (12 fms.) the required depth for the 92 cross cut, and the men are now engaged in clearing stuff preparatory to driving the 80 west on south lode. The stopes and pitches throughout the mine continue to yield fair quantities of ore. The machinery is in good working order, and drawing and dressing are progressing favourably towards preparing ore for our next sampling.

EAST VAN.—W. Williams, Oct. 10: We have driven eastward from the 70 cross-cut 4 fms. The present end looks very poor, but there is a little mixture of lead on the north side of the level. The ground is very unsettled, producing bunches of lead irregularly. What it will eventually do as we drive eastward time alone will prove. We have also driven 8 ft. west of cross-cut, and the lode produces spots of lead ore, but not sufficient to value. I have removed the men from this end, to drive a few fathoms along the hanging of the lode, to try what it will do.

GLENROY.—R. Rowe, Oct. 9: The lode in the shaft continues to be about 3 ft. wide, and to-day more lode is showing on the footwall, containing quartz and a small mixture of lead. Sinking going on well.

GOGINAN.—Oct. 9: The lode in the pitch over the 130, east and west of western shaft, will produce 15 cwts. of ore per fathom. The pitch over the 120, west of Bryn Pica shaft, is yielding 14 cwts. of ore per fathom. The pitch over same level, east of western shaft, is suspended, the lode having become poor. The pitch over the 110, east of western shaft, is worth 9 cwts. of ore per fathom. The lode in the two pitches over the 100 east is yielding 12 cwts. of ore per fathom. The three pitches over the 60 varies in produce from 10 to 14 cwts. of ore per fm. In the pitch over the 26, east of Taylor's shaft, the lode yields ½ ton of ore per fm. All things at surface are being carried on vigorously, and machinery working well. We hope to be able to sample 28 tons of silver-lead ore on Tuesday next the 15th instant.

GREAT HOLWAY.—Oct. 11: We are pushing on as fast as we possibly can with the erection of the engine, and good progress is being made.

GROGWINION.—John Kitto, Oct. 4: There has been no change of importance in any part of the mine since the date of my last report, consequently I have no new feature to refer to. The bottom ends on both lodes continue to open out satisfactorily, but we cannot do much stoping in the backs of those levels for want of air, until we have effected a communication between this (deep adit) and the 68. We are sinking a winze below the 68, and rising towards the same from the deep adit, and hope to get a communication through some time during the current month, when we shall have ample ventilation, and shall be in a position to let new stopes in back of both levels on Nos. 3 and 4 lodes. The stopes in the 24, on No. 4 lode, have yielded very well during the past month, but some of those in the intermediate, and likewise in the 56, have not been so productive as formerly; I hope, however, that they will soon resume their previous yield. We sold on Monday to Messrs. Walker, Parker and Co. 100 tons of lead ore at 9l. 15s. per ton.

HINGSTON DOWN CONSOLS.—Thos. Richards, Oct. 10: Bailey's Shaft: In the 172 east the lode is worth 3 tons of ore, or 6l. per fathom, and is of great promise. The stope in the bottom of this level is for the present suspended, the water being so troublesome as to prevent much progress being made without considerable expense; the men who were employed here are now driving the 174 west. In the stope in the back of the 172 east the lode continues to produce 7 tons of ore, or 25l. per fathom. In the 160, west of Nicholl's winze, there is no change. In the tributers' sink in the bottom of the 160, the lode is improving; at the deepest point reached it is worth 5 tons of ore, or 15l. per fathom, and is exceedingly promising. In the tributers' stope and pitch, in the back of the 110, the lode is producing some good saving work. Fair progress is still being made in the deep adit.

LADYWELL.—Arthur Waters, Oct. 10: The new south shaft is being sunk below the 16, on a lode which is yielding good stones of lead ore of a promising character. The 16, south of said shaft, is now into a sparry lode, worth at present from ¾ to 1 ton of lead ore per fathom. The adit south is going forward into good looking ground. The lode is yielding small pieces of ore, but not to value. I am looking out for an improvement in this end shortly. Other points as for some time past.

LEADHILLS.—Arthur Waters, Oct. 10: Raik Vein—Reid's Shaft: The 20, south of No. 2 winze, is to-day worth in places 7 tons per fathom; 2 ft. above the bottom 6 tons, and ditto back (say) 3 tons—making an average of 4½ tons per fathom. We are evidently going over a great bunch here.

LIVINGSTONE CONSOLS.—W. Vivian, Oct. 10: In the 30 fm. level, driving west of shaft, we have a very promising lode. There is no change to notice in the other parts of the mine since last week.

LLANRWST.—R. Knapp, Oct. 10: The 14, east of Endean's shaft, is being driven, by four men, at 11l. per fathom; the lode in this end is 2½ ft. wide, containing spots of lead, but not sufficient to value. There are two men also driving east on the south part of the lode at this level, which is 4 feet wide, spotted with lead, but not sufficient to value. In the same level west of this shaft the lode is 4 feet wide, of a very promising appearance, and producing 12 cwts. of lead per fathom; driving by four men, at 7l. 10s. per fathom. In the rise in the back of this level, east of the shaft, the lode is 5 ft. wide, producing 25 cwts. of lead per fathom; price for rising, by two men, 5l. per fathom. The lode at the adit east of Prospect shaft is 5½ feet wide, producing 30 cwts. of lead per fathom; two men are employed in this end; price for driving is 6l. 10s. per fathom. There are seven stopes at this level, employing 20 men, the average yield of which is 2 cwts. of lead per fathom, and the average price for stoping is 3l. 6s. 3d. per fm. The lode in the 10 above adit, east of air shaft, is 4 ft. wide, composed principally of lime, spar, and shale, with little strings of lead running through it, but not enough to value.—Diagonal Shaft, and the Old Lode: The stopes east and west of the shaft are suspended, and the men are engaged in fixing the pitwork at the shaft for the purpose of sinking it deeper. The lode in the shaft is 6 feet wide, and will produce 2½ tons of lead per fathom. We hope to complete the pitwork this week, so as to resume the sinking of the shaft on Monday next. The lode in the 9 fm. level, east of this shaft, is 3 ft. wide, composed principally of lime, spar, and quartz, containing spots of lead, but not to value. There is a good lode gone down from the level above, a few fathoms in advance of this end.

MEDLYN MOOR.—Joseph Prisk, Charles Rowe, Oct. 10: At our setting on Saturday the 5th instant we set the following bargains.—No. 1 South Lode: The 33 to drive east by four men, at 5l. per fathom; lode at present small, but producing some rich tinstuff; in driving the level above the rich shoot of tin went down about 3 fms. ahead of the bottom end, which point will be reached this month.—New North Lode: The 20 to drive east of shaft by six men, at 3l. per fm.; lode 18 in. wide, worth 7l. per fathom. The 20 west of shaft by six men, at 3l. per fm.; lode 12 in. wide, worth 10l. per fathom. We are pleased to report that this lode is opening up exceedingly well, the tin being of the very best quality, the ground inexpensive for working, and the lode improving daily, makes us believe that this part of the mine will be a profitable concern, and repay the shareholders for their perseverance and outlay.

MELLANEAR.—John Gilbert, Oct. 9: The lode in the 30, west of cross cut, west of Gundry's shaft, is not so large as it was last week. It is now 2 ft. wide, worth 1½ ton of copper ore per fathom, but we think it will improve again very soon, as we had a change for a short time very similar to this in the rise in the back of the 40. The lode in the 40, west of shaft, is 5 ft. wide, worth 4½ tons of ore per fathom, and a little saving work for lead. The lode in the 50, west of shaft, is 3½ ft. wide, and worth 3 tons of ore per fathom. We have commenced a rise in the back of this level, about 8 fms. behind the end, in a lode 4 ft. wide, and worth 3 tons of ore per fathom. This rise will be necessary to ventilate the 40. The lode in the 60, west of shaft, is 3 ft. wide, and worth 3 tons of ore per fathom. The lode in the winze in bottom of this level is worth 2½ tons of ore per fathom. The lode in the 70 fm. level, west of shaft, is 4½ ft. wide, worth 3 tons of ore per fathom. The winze in the bottom of this level is worth 2 tons of ore per fm. The lode in the 80, west of shaft, is still 5 ft. wide, and worth 1 ton of ore per fathom. The lode in the 90, west of shaft, is 5 ft. wide, producing good stones of copper ore, and is a very kindly looking lode. The lode in the 100, west of shaft is of a very porous nature, is 6 ft. wide, and produces a little saving work for copper ore. The lode in the 100, east of shaft, is 5 ft. wide, and producing 1 ton of ore per fathom, and a good deal of mundic. There is more lode standing in the south side of the level, which we shall cut through this week. In some places in the upper levels the south part of the lode is the best. The lode in the 100 fathom level, west of the skip-shaft, is 3 ft. wide, and getting stronger and better defined, and producing nearly 1 ton of ore per fathom. All our tribute pitches are producing their usual quantities of ore.

MELINDUR.—John Kitto, Oct. 4: The shaftmen were engaged during the first part of the month in putting in a cistern and fixing lift of pumps in the same, in order to keep up the surface water; but the latter part they have been engaged in sinking, and have made very fair progress, and I hope to have the shaft deep enough to commence cross cutting to the lode in six weeks from this time. I have nothing new to report you elsewhere.

MINERAL CORPORATION OF GREAT BRITAIN (HAFNA MINE).—Wm. Bennetts, Oct. 9: The lode in the No. 1 adit end for the last three or four days has been disordered by a cross caunter branch, but by the appearance of the lode today I expect an early improvement here. Two stope in the back of the No. 1 adit are still looking well. I hope to get the No. 2 adit cleared by the end of the present week. The stope in the back of the No. 3 adit is worth 15 cwts. of lead ore per fathom, with a good mixture of blende. We have not yet got through the lode in the No. 4 deep adit, but I am pleased to say that as far as we have seen of the lode it looks well both east and west.

MONYDD GORDDU.—J. G. Green, Oct. 9: I wrote you yesterday as to the sampling, and below beg to hand you setting list. The 34 cross-cut, to six men, at 100s. per fathom; we are not through the lode yet, but as soon as this is proved we shall commence driving west to come under the run of ore ground seen in the 24, and which has a dip of 45° west. The 24 to drive west, to four men, at 150s. per fathom; the lode is very large, but containing no mineral to value, and there is about 6 fms. to drive to catch the dip of slide, where an improvement may be expected. There are four men stoping east from winze 4 fms. above this level (the 24) on a lode worth 2 tons per fathom, in ground very easy for breaking. The 12 cross cut north, to four men, at 120s. per fathom; there is no alteration since I last wrote on this point. The 12 west stope, to four men, at 67s. 6d. per fathom; the lode is worth 12 cwts. per fathom. It will be necessary to have a new rope for connecting our pumps; the one we have is continually breaking. The dressing department is in full operation, and machinery working well.

MORFA DU.—T. Mitchell, Oct. 10: The bottom end is looking very well, and continues to yield good bluestone. The lode has further improved this week, and the forebreast is still letting out plenty of water, which is a favourable indication. The men in the winze are getting on very well with the sinking. The ground here requires timbering, and we are making it secure as we go along. We are also getting lumps of ore from the winze.

NEW BRONFLOYD.—Thos. Kemp, Oct. 10: Settings Report for October and November: No. 3 Shaft—North Lode: Four men to drive the 121 end west of winze, at 20s. per fathom; part of lode carried by this drive is still without any change, being composed of killas and spar, carrying strings of lead ore; the ground appears to be somewhat more favourable for progress. The stope to the east of the winze, over this level, is let on tribute, to ten men, at 130s. per ton; lode worth 25 cwts. of ore per fathom; this price includes the filling up of the workings with attle after the orestuff has been removed. The tribute pitch over the 110, west of winze, is re-let to four men, at 150s. per ton; lode worth 15 cwts. of ore per fathom. The pitch to the east of ditto is let to four men, at 150s. per ton, worth 15 cwts. of ore per cubic fathom. The tributers in the pitch over the 62, east of shaft, are engaged in picking over their stuff preparatory to hauling the same. An arch of ground standing between the 52 and 62, west of shaft, is let to two men, at 160s. per fathom.—Middle Lode: The men in the 73, west of Curtis's cross-cut, are still employed in stripping down the south part of the lode against the cross-course mentioned in the last report; we have stripped the same down to 9 ft. wide, and still without any signs of footwall; the lode so far as seen has a strong and masterly appearance, composed of killas and spar, intermixed with excellent quality ore—in fact, it is a fine lode, and it will take us some little time to ascertain whether the ore will make back east through the cross-course. The pitch over the 40, east of shaft, is re-let to two men, at 160s. per ton. Hauling and dressing going on with all speed possible. Machinery in good working order.

PANDORA.—H. Nottingham, Oct. 9: We have now had the pumping-wheel going regular for three weeks, and the water is now forked about 4 fathoms below the 13 fm. level. The pitwork is doing its full duty. We have thus far been fortunate in having no failing in the lifts working under water, and the line of flat-rods run much lighter for the wheel since we refitted the wheels and put new frames under them where required. Our pumping gear is now in as good a condition as when it first started. By the end of next week I hope to see the water down to the 23, so that we may be able to resume drawing and dressing. At surface we are making fair progress, having fixed the bed-plate and boiler of the engine in its place, and in readiness to put the engine together again. The weather is stormy and wet at times, which hinders us much with this work. I have a house bought ready to cover the engine, and we shall lose no opportunity of getting this up and rear it temporarily for shelter over the engine that we may continue the work without hindrance. We have a fair supply of water to work with now, and I calculate on not requiring the engine for work till next summer, but it may be serviceable to us during this winter's frosts.

PARYS MOUNTAIN.—T. Mitchell, Oct. 10: There is no change calling for any special remark in the 90 south this week. The ground continues to look much the same as for some time past. We are meeting with good stones of copper ore occasionally.

PATELEY BRIDGE.—Charles Williams, Oct. 10: The 30 east, on Rake vein, has been driven during the month 5 fms. 3 ft.; the vein in the present end is 6 ft. wide, consisting of fluor-spar, gossan, and fine boulders of lead ore, worth of the latter 1 ton per fathom, and improving every foot as we advance. The ground behind the forebreast, 20 fms in length, is all whole to the horse level in back of the 35 fm. level; set for the month to eight men, at 100s. per fathom. The vein in No. 2 stope in the back, over this level, 20 fms. east of engine-shaft, is 4 ft. in width, and worth 1¼ ton of lead ore per fathom; set to six men, for the month, at 5l. per ton of dressed ore. A tribute pitch in the back of ditto is worth 16 cwts. of lead ore per fathom; set to four men, for the month, at 5l. 12s. 6d. per ton of dressed ore. The 20 east, on Rake vein, has been extended during the month 7 fms. 3 ft. The vein in the end consists of gossan, quartz, and cubes of lead ore. The ground is very favourable for progress, and I hope now to soon make a good discovery in this direction; set to four men for the month, at 40s. per fathom. The tribute pitch under the 20 east is worth 15 cwts. of lead ore per fathom; set to two men, for the month, at 6l. per ton of dressed ore. The 20 west, on Lamb vein, was driven in the past month 3 fms, in a vein 4 ft. in width, chiefly composed or gossan and fine blocks of ore, worth about 10 cwts. per fathom. The prospects here are very good; set to two men, for the month, at 30s. per fathom. The tribute pitch in Fielding's vein in the 20 is worth 16 cwts. of lead ore per fathom; set to two men, for the month, at 5l. 12s. 6d. per ton of dressed ore.—Prinpap: This level has been driven 2 fms. 3 ft., in a vein 6 ft. wide, composed of carbonate of lime, quartz, and strong patches of lead ore throughout; set, for the month, to four men, at 120s. per fathom. The ground is rather hard and spare for driving. Produce for September 45 tons of lead ore, worth 450l., at a cost of under 350l. Lead ore on hand dressed 70 tons; ditto weighed to smelters, 40 tons, which will produce 30 tons pig-lead, and will be ready for sale in a week's time. We sold on Sept. 21 20 tons 0 cwts. 3 qrs, 16 lbs. pig lead for 300l. 13s. 1d. Machinery working very satisfactorily.

PENHALLS.—S. Bennetts, P. Vian, Oct. 5: The north part of the lode has not yet been cut in the 70 east north cross cut end. The west end in this level is worth 8l. per fathom. The 60 east end is worth 7l. per fathom, and 55 east, on the south part of the lode, 7l. per fathom. In the western part of the mine the 49 west end is worth 8l. per fathom.

PENNANT.—Oct. 11: The driving the 80 west is proving to be upon an entirely new lode, and we are getting therefrom huge rocks of lead and carbonate, some of them weighing 2 cwts.; it is opening out very satisfactory, and there is every probability of its running back through the whole sett.

PENSTRUTHAL.—W. Polkinghorne, Oct. 10: In the 88, driving east of Highburrow shaft, the end is still in the elvan course. In the 88, driving west of Highburrow shaft, the men are making good progress in driving, but we have not yet intersected the lode. In the rise in the back of the 72, east of Highburrow shaft, the lode is at present small and poor. The lode in the 73, driving west of Highburrow shaft, is 3 ft. wide, and yielding 1½ ton of copper ore per fathom. In the 34, driving east of Highburrow shaft, on the tin lode, the lode is 2½ ft. wide, and worth for tin 6l. per fathom. Of the 46 cross cut, driving south of Highburrow lode, west of Highburrow shaft, we have nothing new to report. We shall sell our usual quantity of tin for the month on Saturday next.

PRINCE OF WALES.—John Andrews, Oct. 9: The tributers in the back of the 24 are going on much as usual and raising a little silver ore.

ROMAN GRAVELS.—Arthur Waters, Oct. 10: The new south engine-shaft is 10 ft. below the 110, and the ground of the usual character. The 110 north is being driven on the footwall part of the lode, but the end is without ore to value at present. When we get beyond the influence of the cross-course—in about 3 fms. further driving—the ore ground will be met with. The 110 south is worth 1 ton per fathom. The 95 south is worth 3½ tons per fathom; the lode is 7 feet wide. The 80 south is worth 2¼ tons per fathom, and improving. The 60 south has again improved, now worth 2 tons per fathom. The stopes, &c., throughout the mine as valued in the report read at the meeting last week. Our usual sampling of 110 tons takes place next Thursday.

ROOKHOPE.—Thomas Davidson, Oct. 3: Adit Level: In consequence of the vein turning poor I have stopped driving west from rise (No. 11 on section), and set the men to stope the ground we have laid open; value, 8 cwts. per fathom. We have a considerable amount of vein rider in stopes Nos. 11 and 12, but lying very flat; value, 8 cwts. per fathom. Stopes Nos. 12 and 13 are not so good as at the setting; value, 1 ton per fathom. In No. 13 the vein through some cause has become nearly filled with plate and donk, so, in consequence of that change, I have set the men to put a rise up, in order to see the character of the vein at a higher random; value, 6 cwts. per fathom. The stope east and west over adit level roof continues about the same; value, 15 cwts. per fathom. The above workings are all east of Gin shaft.—Over the 42 Fm. Level: In driving the drift east from old winze, 4 fms. below the 25 sole (No. 5 on section), the vein is hard, and rather divided at present; value, 10 cwts. per fathom. The driving west from same point (No. 3 on section) continues about the same as previously reported; value, 10 cwts. per fathom. In the rise in No. 8, east of Low shaft, from the 42, there is a considerable amount of vein, but poor; value, 6 cwts. per fathom. In the rise in No. 7, east of Gin shaft, from the 42, there is no change to report, but in consequence of being almost up with this rise we are engaged in drawing the water out of the old winze from the 25—the point at which we intend holing through. I expect to accomplish this in the course of next week; we shall then be in a position to lay open more ground for ore raising, and also pushing forward the 42.

— Oct. 10: Adit Level: In stope No. 12 on section the ore is cutting out fast, the plate coming over the top of us as it did in No. 13; present value, 16 cwts. per fathom. Four men have been removed from No. 13 stope to push forward the holing of the rise from the 42 to old winze. We are stoping with four men over the adit level roof (No. 11 and 12 on section); value, 16 cwts. per fathom. Four men have been moved back west to stope in No. — on section; value, 8 cwts. per fathom. Four men have been removed to stope over the 15 (No. — on section); value, 8 cwts. per fathom.—Over the 42 Fm. Level: In driving the opening drift east from old winze, 4 fms. below the 25, the value is 10 cwts. per fathom (No. 3 on section, east of Low shaft). In driving west from the same winze (No. 3 on section) the value is 8 cwts. per fathom. The rise in No. 8, east of Low shaft, is only poor; value, 6 cwts. per fathom. We have eight men in the rise in No. 7, east of Gin shaft, following it night and day, with the object of holing as soon as possible. It will take us a few days yet to hole, but we are doing our best.

RED ROCK.—John Kitto, Oct. 4: Since the date of my last monthly report we have effected a communication between the two main shafts at the 10, and have

secured ample ventilation for every purpose down to this point. We have also resumed the sinking of the eastern shaft for a deeper level, and shall continue the same with a full set of men, as it is important that it should be got down for a new level with as little delay as possible. The new discovery to the west of this shaft still continues to look well, and so far fully answers our expectations. The stope in back of the level is yielding very good ore, and the bottom of the level has every appearance of being by far the richer of the two. We have cleared sufficient stuff from the bottom of the mine to enable us to resume the driving of the 73 cross cut, and I am glad to say we have already intersected the lode, which shows very fair prospects, and contains strong spots of lead. We may reasonably expect this to improve greatly as we drive eastward towards the run of rich ore ground discovered some months ago in the 60, and which is only a comparatively short distance in advance of the 73. We have not yet been able to resume the driving of the 60 east, as it is still full of orestuff, but we hope to do so shortly, as we have now ample water power for drawing. I am pleased to be able to say the prospects of the mine continue to improve in proportion to the new ground opened, and with a fair average price for lead ore I should have no fear of being able to make it pay working expenses, and leave a very satisfactory profit. We have sold since my last report, to Messrs. Nevill, Druce, and Co., 40 tons of lead ore at 8*l*. 19s. per ton.

SAINT PATRICK.—Wm. Francis, Oct. 9: The cross-course in the 120 yards north cross-cut has turned a little westward, the ground being tighter, with a horse of ground between the walls, but the softer parts are mixed with fine looking spar and other compounds of a promising kind. I expect a favourable change to report shortly from present appearances. The progress has not been so good here nor in the 60 as last month, the chert in the latter cross-cut having got stiffer, but of the best bearing kind however, and I am in constant expectation of good results in both drivings, which are still moving forward with good speed.

ST. HARMON.—John Kitto, Oct. 5: We have not yet intersected the main part of the lode in the 67 cross cut (as I expected we should have done ere this), and it is very evident that it is bearing more to the north than I anticipated. The ground, however, is getting much stronger, and the water is increasing as we advance, and at present there is every appearance of the lode being close at hand. There has been no change in any other part of the mine during the past month. The ground in the 48 cross cut is of a very congenial character for lead, but at present there is no sign of either of the south lodes. The stope above the 35 continues to yield about its usual quantity of ore, and the machinery is in thorough good working condition.

SOUTH CONDURROW.—William Rich, William Williams, Henry Abraham, Oct. 8: The breakage to the stamps, referred to in our report of last week, has been repaired, and the machinery is now in good working order. We sold on Saturday last 16 tons of tin. The stopes and pitches throughout the mine are looking much the same as when last reported on.

SOUTH CWMYSTWITH.—John Kitto, Oct. 4: There is an improvement in the lode in the intermediate level driving east from the cross-cut, and in the deep adit level driving west on Penguelan lode, and prospects have changed very much for the better, and we have had more ore during the last few days than we have had for months previously. I have strong hopes that we are getting into a rich bunch of ore, and as this ground is standing whole to surface a discovery such as I anticipate here would be of the utmost importance. The lode altogether looks more promising than it has for a long time, and the ground is much more congenial for the production of lead ore. I have nothing else now to report from any other part of the mine, but things on the whole, I am glad to say, are more encouraging.

SOUTH DARREN.—H. James, Oct. 3: Now the lift is fixed at the 100 and the water in fork, the necessary ground for trip lodge will soon be cut, and the skip-road brought down to the 100. The lode in the 100 end west from shaft remains the same as when last reported; the driving is progressing favourably. The 100 end east from winze is being driven in a very wide and masterly lode; the full width not known; present value of the driving is 38*l*. per fathom. The 100 end west from winze is worth 45*l*. per fathom, with every indication of a continuance of a piece of rich ore ground. Every effort is being put forth to communicate this level with the one from the shaft as quick as possible, and as soon as this has been effected we shall have a very valuable section of ore ground laid open for stoping, and which will enable us to increase our samplings, for I am confident from the results so far of opening up the 100, and watching very carefully all the indications, that the lode is becoming more massive and productive for greater width, and the ore deposits decidedly deep setting. The lode in the 90 end we are now in course of taking down, which is from 12 to 15 feet wide, is worth for this width from 50*l*. to 60*l*. per fathom. The stope in high back of this level is worth from 38*l*. to 40*l*. per fathom. No. 1 stope in back, east from winze, is worth 25*l*. per fathom. No. 2 stope west is worth 5*l*. per fathom for full width of lode. The men have resumed the driving of the 80; this end is in a disturbed and unproductive piece of ground at present. No. 1 stope in the back of the 80 is worth for lead and copper ores 20*l*. per fathom. No. 2 stope is worth 6*l*. per fathom. We have commenced to cross cut close to the 70 end to prove the lode. We shall sample on Saturday 40 tons of rich silver-lead ore, for sale on the 11th inst.

— Henry James, Oct. 10: The lode in the 90 end still maintains its width, but fluctuates in value, though still opening out very good stoping ground. We have cut through the lode in the 100 end west from shaft, which is about 16 in. wide, and worth about 17 cwts. lead ore per fathom. All other points are without noticeable change.

SOUTH DE ERESBY MOUNTAIN.—T. Bennetts, Oct. 10: Setting Report: We have set a cross-cut to drive in the No. 1 adit, by two men, at 85s. per fathom. The No. 2 to drive, by four men, by the side of the No. 1 lode, at 11*l*. per fm. The rise in the back of the No. 1 lode, by two men, at 50s. per fathom We have set four men to drive east on the new east and west lode at 90s. per fathom. No. 1 end is looking well, and yields good lead—1¼ ton per fathom. The new east and west lode opens well, and is very promising. I will advise you when we take down the No. 1 lode. The mine throughout looks well.

SOUTH ROMAN GRAVELS.—John W. Powning, Oct. 10: The lift is in its place, and we are now busy putting the engine together, the most of which, I am pleased to say, is fixed. I hope to complete this work, and start the sinking with a full pare of men, in the course of a few days.

SOUTH TOLCARNE.—Wm. Rich, J. Knotwell, Oct. 8: The lode in the 38 end east is increasing in size, and the ground is rather easier for working. There is no alteration to notice in the 24 end since our report of last week.

TANKERVILLE.—A. Waters, Oct. 10: Watson's shaftmen have commenced sinking below the 206, at 20*l*. per fathom. The 206 west is worth 1¼ ton per fathom; lode wet, and looks like improving. The 206, south of Hooton's winze, east of shaft, is worth 1¾ ton per fathom. There are five stopes in the back of this level east and west of shaft, worth together 8 tons of lead ore per fathom. The winze in the 192, near the west end, is worth 1½ ton per fathom. There are three stopes in the back of the said level, worth together 4 tons per fathom. The 120 west as a pioneer level is in a lode 6 in. wide, yielding small pieces of ore. The 92 cross cut, south of old lode towards the side lodes, is wet, and would seem to be near one of the veins we are in search of. The stope in the back of the 74, on south lode, is worth 1¾ ton per fathom. We have 12 pitches at work, by 25 men, at tributes varying from 4*l*. 15s. to 6*l*. per ton of dressed ore.

TANYRALLT.—Oct. 10: There is nothing new to report; the stopes continue the same. We have been drawing lead from the stope in the 12, and there is now a nice pile of ore from it at surface. We have not drawn any lead from the two stopes in the 22. We have sold 8 tons of best ore, which we crushed dry and did not jig at all, to Messrs. Neville, Druce, and Co., and it has been sent off. There is another parcel ready dressed in the bin if it is decided to sell it at the present low price.

TEMPLE.—Oct. 9: There is no particular change to mention in the underground works since the last report, except that in No. 1 level some very good stones of lead have been met with; some 5 or 6 fathoms further driving will bring this level under the commencement of the course of ore in Nos. 2 and 3 levels. At surface fair progress has been made with the buildings and erection of machinery, notwithstanding the unfavourable weather of the past week, during which very severe storms of rain and wind have occurred. The water-wheel is completed and the crusher partly erected; the wheel pit for the second water-wheel is nearing completion, and automatic dressing appparatus, &c., will be ready for delivery on the mine at an early date.

TYN-Y-FRON.—E. Jones, Oct. 8: We have driven the cross-cut north of the eastern level full 7 fms., but we have not yet reached the lode. I have seen Capt. Francis, and he advises our continuing it for another 3 fms., to make sure of its not being north. Previous to seeing him we have been stripping down the north side of the No. 2 stope, to see the full width of the lode there and its produce. We find it still producing blende, but not so strong as we have previously gone through. I will go and see the tram-rails, &c., at the Rheidol, and make a list of same for you, as requested.

VAUGHAN.—Oct. 9: In the cross-cut south, at the deep level east, the ground is chiefly composed of a light clay-slate, beds of grit, and spar, containing occasionally small spots of copper and lead ore. In the 30, west of cross-cut, on the south part of the lode, the lode looks promising, and a little improved, now yielding from 15 to 16 cwts. of lead ore per fathom. In the stope over the 30 east there is no chage to notice since last reported on, and is nearly worked through to the level above. Our machinery is in good order, drawing and dressing being pushed forward with all vigour, and hope to sample on Tuesday next, the 15th inst., 16 tons of silver lead ore.

WEST ASSHETON.—George Rickard, Oct. 1: The lode in the 60 west did not yield much ore to value when taken down last. We are pushing on the driving this end with speed. We have commenced cross-cutting south about 75 fms. west of shaft to prove what portion of the lode still stands, and what side lode may be near at hand. There are strong indications of their being more lode in this direction undiscovered. The pitches in the back of this level upon the whole have greatly fallen off in yield, but there is good probability of this again improving. We have communicated the 40 west to the 50 west, and thereby opened up ventilation to both these levels. We are now tinking a winze below the 50 fathom level west to communicate to the 60, for the double purpose of assisting the ventilation at the 60, and laying open ground in the back that will, it is expected, work to tribute. It should be understood that there has hitherto no communication anywhere in the 60 west, and that articial ventilation is not generally sufficient to deal with dynamite fumes so as to render them harmless to the men. Such is the case I believe here, but the holing this winze will greatly help a large portion of the level in this respect. There is no change to notice in the 40 and 50 west; both these ends are now suspended for the time, the men in the 40 being put to cross-cut south in said level to prove what more lode may be standing by the side of the level, and the men in the 50 put to sink the winze in the bottom of the level, as above mentioned. The pitch in the back of the 50 west has improved. When stopping to repair the boiler we also cleansed it, which economises fuel. I need not state our sampling has been considerably retarded on account of the stoppage to repair the boiler. We shall, however, be ready to sample again another parcel of lead very shortly. A vessel has arrived to take the parcel of lead to Dillwyn and Co., and directly that is loaded we intend to sample another parcel.

WEST CHIVERTON.—R. Southey, W. Roberts, J. Moyle, Oct. 10: At Batters' engine-shaft the sumpmen are now employed cutting plat in the 70, on the completion of which we shall bring down the skip-road and open out on the lode. In the 160, west of shaft, the lode is 2½ ft. wide, producing occasional stones of lead; driving by four men, the month, at 6*l*. per fathom. In the 160, east of cross-cut, on the north lode, the lode is 3 ft. wide, and worth for lead and blende 8*l*. per fathom; set to four men, the month, at 8*l*. per fathom. The lode in the 150, east of Batters', has improved in the last 3 ft. driving, and is now 3½ ft. wide, and worth 6*l*. per fathom for lead; set to six men, 20 fathoms certain, at 6*l*. per fathom. The 140 to drive east of Hawkes' shaft, by four men, the month, at 8*l*., 8*l*. per fathom; lode 2½ ft. wide, worth 8*l*. per fathom for lead. The 140 to drive west of Hawkes' shaft, by six men, the month, at 12*l*. per fathom; lode fully 4 ft. wide, worth for lead and blende 6*l*. per fathom. The 130 to drive east of Batters' shaft, by four men, the month, at 8*l*. 10s. per fathom; lode 3 ft. wide, and worth for lead and blende 10*l*. per fathom. Everything at surface is progressing very satisfactorily.

WEST CRAVEN MOOR.—David Williams, Oct. 10: Blackhill adit Level: This level has been extended during the month 3 fms. The ground has been spare for driving, but is now much easier, and better progress is being made. A great stream of water is issuing from the south side, which indicates that the ore bearing part of the vein is still on that side of the level, and which I hope to intersect in a few yards further driving. The end is within about 60 fms of being under the new west shaft, which is upon a parallel vein, and this level is draining the water from the 20, west of the said shaft. The No. 3 stope in the back of the 12, west of shaft, by two men, in a vein 4 ft. wide, and worth 15 cwts. of lead ore per fathom. No. 1 stope in the back of this level, 14 fms. east of shaft, is in a vein 3 ft. wide, and worth 12 cwts. of lead ore per fathom. No. 2 stope in the back of the 32, east of shaft, is in a vein 3 ft. wide, and worth 16 cwts. of lead ore per fathom. The 42, west of shaft, has been extended during the month 7 fms. in a vein 5 ft. wide, and heaved north about 3 fms. by the flat lode referred to in my last report. I have set a pare of men to rise in the back of this level to prove the vein above the flat lode, which at such junction has invariably proved rich. The 42 has been extended during the month 6 fms. in a vein 5 ft. wide, consisting chiefly of gossan, limespar, with branches of barytes intermixed with spots of lead ore.—New East Shaft: No. 1 stope upon No. 2 vein, in the back of the 20, by two men; vein worth 12 cwts. of ore per fathom. No. 2 stope upon the same vein is worth 20 cwts. of ore per fathom. On the surface our pumping and hauling machinery is in excellent order, and working well. We have about 30 tons of lead ore at the smelt mill ready for smelting.

WEST GODOLPHIN.—John Pope, Oct. 5: Monthly Report: Caunter Lode: The 80 is driving north, by eight men; distance worked, 29 fms.; the last 9 feet driven through has been composed principally of capel, which is producing some good stones of tin, and all saving work for the stamps; this, we think, belongs to Wilson's lode, although we consider that we have 2 fms. more to drive to get fairly into the lode. Judging from present appearances, we shall be able to accomplish that by the end of next week.—Wilson's Lode: The 70 is driving west, by six men; part carried 4 ft. wide, worth 6*l*. per fathom; distance worked, 34 fms. 4 ft. 6 in., producing tin and copper; there is more lode standing in the sides of the level. The 70 is driving east, by six men; part carried 4 ft. wide, worth 5*l*. per fathom for tin: distance worked, 24 fms. 0 ft. 9 in.; there is more lode standing in the sidesof the level. No. 1 stope in back of the 70 west, by six men; the lode is 10 ft. wide, worth 12*l*. per fathom for tin. No. 1 stope in bottom of of the 60 west, by six men; thelode is 8 ft. wide, worth 15*l*. per fathom for tin and copper. No. 2 stope in the bottom of the 60 west, by six men; the lode is 6 ft. wide, worth 12*l*. per fathom for tin. No. 3, ditto, by six men; the lode is 9 ft. wide, worth 10*l*. per fathom for tin and copper. No. 4, ditto, by six men; the lode is 8 ft. wide, worth 9*l*. per fathom for tin and copper. No. 5, ditto, by six men; the lode is 7 ft. wide, worth 8*l*. per fathom for tin and copper. No. 6, ditto, by six men; the lode is 7 ft. wide, worth 10*l*. per fathom for tin. No. 3 winze, sinking below the 60, by six men; part carried, 3 ft 6 in., worth 5*l*. per fathom for tin. There is more lode standing in the sides of the winze. No. 1 stope in back of the 60 west, by four men; the lode is 3 ft. 6 in. wide, worth 8*l*. per fathom for tin. No. 1 stope in the bottom of the 60 east, by six men; the lode is 5 ft. wide, worth 8*l*. per fathom for tin. No. 2 stope in the bottom of the 60 east by twelve men; part carried 12 ft., worth 18*l*. per fathom for tin. We have two men working on tribute, in the back of the 60, north of Wilson's engine shaft, on caunter lode, at 10s. in 1*l*. tribute, at a standard of 30*l*. per ton for the tin. I calculate that we shall sell about 14½ tons of tin this month, and have at surface about 3 tons of tin not stamped. We have about 1:0*l*. worth of copper ore and precipitate copper dressed ready for the market. Our machinery is all working very well. Wilson's engine is working about 4¼ strokes per minute.

— John Pope, Oct. 9. The water in the 80 driving north is increasing daily, and we are expecting every day to cut into the main part of Wilson's lode. The other places are just as last reported. Our steam stamps have been working all the time in the past month, Sundays excepted; but we have been able to stamp but very little with the water stamps; I think it will not average more than four heads. Capt. Curtis inspected the mine on Monday for his Grace the Duke of Leeds.

WEST GOGINAN.—J. Kitto, Oct. 4: I have nothing new to report to you from the mine. The shaftmen who were driving the adit level are now preparing for sending down and fixing the larger pumps, all of which has been sent on to the mine, and not a moment will be lost in getting the same to work. After this is completed I expect a few days will suffice for getting the water out to the bottom of the mine, and I anticipate no difficulty afterwards in keeping it quiet clear.

WEST PATELEY BRIDGE.—D. Williams, Oct. 10: No. 2 Shaft: The 20 fm. level, upon North Rake vein, has been extended east of shaft 56 fms. 2 ft.; the vein in the present end is fully 4 ft. wide, its component parts being spar, gossan, and branches of lead ore of good quality, worth 15 cwts. per fathom. A stope in back of level, by two men, in a vein 2 ft. wide, worth for lead ore 10 cwts. per fm. In the 28 east the vein is 3 ft. wide, and carrying a leader of lead ore on the footwall, being good saving work for dressing. In the 28 west we daily expect to reach the north and south vein, west of which the North Rake vein was very rich close to surface, and upon the same we purpose cross cutting south to get under Discovery and No. 1 veins. Craven Cross shaft is sunk and secured to a depth of 51 fms. below surface. The 56 is being driven west by a full pare of men, and is within 29 fms. of being under the Craven Cross shaft. The vein in the end is 4 ft. wide, composed of spar and barytes, and intermixed throughout with good patches of ore. We have a parcel of ore at the mill in course of smelting.

WEST ROSKEAR.—H. Stephens, W. Bennetts, Oct. 10: There is no change to notice in Lanyon's shaft. Stephens's shaft is down to the 24, and we are engaged putting down skiproad to draw from that level; the lode in the shaft has much improved both for copper and lead since our last report. The lode in the 24, east of sump-shaft, contains a little ore, but not sufficient to value; we expect an improvement here soon. The 36 is drained; the level is driven about 10 ft. east and about 6 fms. west, also a cross cut south to intersect the caunter, but the lode is not out through, both the lodes are large, but more of the stuff must be cleared before we can judge of their value or character; it will take the whole of this week to clear the stuff and enable us to see the nature of the lodes.

WEST TANKERVILLE.—A. Waters, Oct. 10: The 86, south of boundary shaft, is worth 1 ton of lead ore per fathom. The three stopes in the roof of this level are worth together 2 tons per fathom. The stope in the bottom of the 63 south is worth 1 ton per fathom. The stope in the bottom of the 50 south is worth 1 ton per fathom.

WEST VOR.—S. Harris, Oct. 10: The operations of sinking and rising progress satisfactorily, and the lode in the rise still produces some good tinstuff.

WEST WHEAL SETON.—W. R. Rutter, M. Bath, S. Terrill, Oct. 5: During the past eight weeks Mitchell's engine-shaft has been sunk 6 fms. It is now at a sufficient depth under the 165 for another level, and we have, therefore, set a 177 level to be driven west at 8*l*. 10s. per fathom. The lode is 8 ft. in width, of a sparry character, containing some mundic and occasional stones of tin. The lode in the 165 end, driving west of Michell's shaft, consists of chlorite, mundic, tin, and stones of copper ore, worth 12*l*. per fathom. The lode in the 150 end, driving west of Michell's shaft, is 4 ft. wide, and is worth for tin 10*l*. per fathom. The cross cut which is being driven north at the 140 in the hope of intersecting the new north lode, is 124 fms. to the west of Michell's shaft. At present it is passing through a compact killas, and thin faces of copper ore are occasionally met with in the joints of the rock. The north part of the lode in the end, driving west of Michell's shaft at the 140, is worth 7*l*. per fathom. At the different levels there are seven stopes at work by 60 men and four boys, and the tinstone broken therefrom varies in value from 1½ to 2 per cent. There are 13 pitches at work also, at tributes varying from 9s. to 13s. 4d. in 1*l*.

WEST WHEAL TOLGUS.—Oct. 9: Taylor's Shaft: The ground continues very much the same as last reported—hard and spare for sinking in. The lode in the 145 west is hard and poor, principally white iron; there is a great part of the lode standing to the north of the end, but as the end has passed under No. 3 winze below the 135 we shall set the end men to begin to rise towards it on Friday, it being our monthly setting day, so as to communicate it with the winze, after which we shall take down the north to see what it is worth. The ends on the south part of the lode have been communicated from No. 1 to No. 3 cross cut; the lode has been orey all the length; worth on the average from 2½ to 4 tons per fathom. Yesterday we set a pare of six men to drive south about 3 fms. west from shaft, by the side of the cross-course, with the hope of cutting the south part; we think it must be there. The lode in No. 3 winze under the 135 is hardly so good as it has been, yielding 4½ tons of ore per fathom; it is a wide lode; we are carrying 6 ft. of it, and there is a great piece standing to the north, which will be taken down after the winze is communicated, which we hope to do before the end of October. The lode is principally composed of white iron and ore; the ore is good; it is a fine-looking lode. The lode in the 135 end west is 3 ft. wide, yielding about 1½ ton of ore per fathom; is is a kindly end, and letting out water freely. We expect more ore in this end very soon. There is a beautiful elvan running with it. The lode in the 125 end west is poor, and the ground broken up and disordered.—Richard's Shaft: The ground is without much alteration—light killas, and the branches yielding good stones of ore. We hope next month to get the shaft deep enough for the 105. The lode in the 65 end is still small and poor.

WEST WYE VALLEY.—J. Kitto, Oct. 5: The lode in the 40, east of Brooke's shaft, has been productive during the whole of the past month, and is still yielding good ore, but judging from its favourable character I believe there is still richer ground before us. The rise in the back of the 52 has improved, and will, no doubt, continue to do so as it gets near to the 40, as in this latter level, immediately over the rise, we had a splendid bunch of ore. The stopes are looking much the same as they have for some time past, and I have no change to report to you. Since my last we have sold 40 tons of lead ore to Messrs. Walker, Parker and Co., at 9*l*. 10s. 6d. per ton, and we shall sell a similar quantity during the current month.

WHEAL CREBOR.—John Andrews, Oct. 7: Setting Report: To drive the 120 end east, by four men, at 7*l*. 10s. per fathom; the lode is 3 ft. wide, and worth 5*l*. per fathom. No. 1 stope in the back of the 120, by six men, at 2*l*. 5s. per fathom; the lode is 3 ft. wide, worth 8*l*. per fathom. No. 2 stope in the back of the same level, by six men, at 3*l*. 10s. per fathom; the lode is 4 ft. wide, worth 6*l*. per fm. To drive the 108 end east, by two men, at 6*l*. per fathom; the lode is small and poor. To drive the 72 end east, by two men, at 3*l*. 15s. per fathom; the lode is 2 ft. wide, composed principally of quartz, capel, and mundic. To drive the 48 end east, by two men, at 7*l*. 10s. per fathom; the lode is 18 in. wide, yielding a little copper and mundic, but nothing to value. I have not set the new shaft to sink, as we are at the present time short of men.

YNYS.—Peter Williams, Oct. 10: We have discovered a very good course of ore on a lode standing to the south of the principal lode in the old workings; it is worth over 1 ton per fathom, and appears to be very rich for silver; we are now sinking on it. We have put a lift of pumps into the old shaft where we had the rich discovery, and have been breaking some splendid stones of ore from the bottom

WHEAL GRENVILLE.—T. Hodge, Oct. 9: Goold's sumpmen are engaged cutting ground for bearers and cisterns preparatory to fixing standing-lift. Two stopes in the bottom of the 150 have fallen off in value, and are suspended. No other change worthy of note.

PRINCE PATRICK MINE—MONTHLY REPORTS.

Oct. 2.—In handing you my monthly report I have much pleasure in informing you of an important improvement in the mine. In driving the 50 fm. level north, on the great south-west lode, we have cut into very good ore, and although only discovered yesterday morning several hundredweights of lead have already been taken from it, some of it in pure lumps from 1 to 2 cwts. each. I look upon this as a very valuable discovery, and fully believe it is the beginning of another great deposit of ore; I shall be able in a few days to give you its value per fathom, and also further particulars respecting it. The driving on the great south-west lode, in the roof of the 50 north, is producing saving stuff for washing, and promises to further improve. The character of the lode is everything that one could wish for the production of large quantities of lead. Hughes' shaft is being sunk below the 50 fm. level with a full complement of men; the ground has gone harder than it was last month, consequently our progress in sinking is rather slow—however, I expect it will ease again shortly. No effort shall be spared to urge on this point, as we have a splendid course of ore gone down below the 50 fathom level, only 10 fathoms from this shaft. The sump sinking below the 20, east of Rule's shaft, is down about 4½ fathoms. I expect to reach the white limestone in another 9 ft. sinking, when a great improvement in the lode may reasonably be looked for. The rise in the roof of the 50, south of Rule's shaft, is within 3 fms. of the height required to communicate with the sump in the 20 west, on the pipe. The rise has already drained the sump, and some good lumps of ore are being found in the roof of the rise. In concluding this report I feel very proud to be able to state that the mine has more than doubled in value within the last day or two, and I feel confident that other valuable discoveries will be made shortly, independently of the great flat in the 50 north.—H. B. Vercoe.

Oct. 9.—I have been underground in the Prince Patrick Mine to-day, and I have much pleasure in stating that the 55 north is in a splendid course of lead, which gets stonger every day. We are only carrying with us about 8 ft. of the flat, and are leaving lead on both sides, and what may be under foot we have not yet proved, but I expect there are other flats of ore similar to the one we are driving on. We have been winding lead to-day, and I wish the directors had been here to see it, they would think the good old times of Prince Patrick had came again. I think to-day's stem winding will yield 2 tons of solid lumps of lead ore, and I expect another lot equal to it again on Friday or Saturday. We have commenced washing, and the place is now assuming its old appearance. Other points are without change.—H. H. Vercoe.

LEAD ERA MINING SETT—SPECIAL REPORT.

The following special report has been received from Mr. J. Dawes, F.G.S., which in addition to those inserted in the prospectus, published in this day's Journal, is especially worthy the attention of the investing public:—

Print-Du Lead Mines, Sept. 30.—On the 26th inst., in company with Capt. Joseph Ede, I made a careful surface examination of the Lead Era sett. Entering the property on the west, there are five strong lodes clearly defined at surface, and possessing all the characteristics of rich metallic veins. These lodes after entering this sett are lost to view under the overlying strata, but their continuation through this sett is beyond a doubt. The geological formation is that of the lower series of the carboniferous system, and consist of millstone grit and various alternate beds of sandstone, shales, lime, and cherts. In these measures, and between the millstone grit and the carboniferous limestone, there are two persistent and conformable mineral-bearing beds, technically termed the upper and bottom "flats;" these beds, when intersected by lead-bearing veins, are invariably productive themselves, and in many instances in this neighbourhood have been immensely rich. The thickness of these beds varies from a few feet to 15 fathoms. This is, doubtless, caused by volcanic and electrical influence, assisted, probably, in some instance by denudation, but in every instance where the disturbance has been most violent the deposits of metallic ores seem to be most prolific.

It has seldom been my lot to inspect a mining property offering such facilities for easy development not only of the flats but of the lodes also, for by proving the one you most effectually prove the others. A level driven westerly on a point seen in the ravine would cross the measures and prove everything from that point to the outcrop of the main limestone. In urging the importance and value of this sett as a mining enterprise I would draw attention to the following main facts:—

1.—The number and character of the lodes entering the property from the west.
2.—The two productive flats.
3.—The fact of these flats invariably being rich when intersected by lead veins.
4.—The great disturbance of strata so favourable for large metallic deposits; and
5.—The splendid natural facilities you possess for a rapid and economical development of the property.—J. Dawes, jun., F.G.S.

SUCCESSFUL FINANCING—THE ISABELLE AND EXCHEQUER COMPANIES.

We quote the following from "Investments," explanatory of the distinctive features which have proved so eminently successful in the introduction of these two companies:—

THE ISABELLE GOLD AND SILVER MINES.

THE TUNNEL—100 PER CENT. CASH BONUS—400 PER CENT. UPON AMOUNT ASKED FOR.

The list having been closed with applications for more than double the amount of capital to be allotted, there is nothing surprising in the fact that buyers in the market find it difficult to purchase. Based upon a sound principle that, ably administered as it will undoubtedly be, it cannot fail to be permanently lucrative to its shareholders—100 per cent. bonus will be returned almost forthwith, equal to 400 per cent. on the amount now asked for; as a finance company, therefore, its success may be considered as assured. The remunerative and progressive income from tolls establish its profits as a Tunnel Company; and, further, as a Gold and Silver Mining Company: the measure of its success depends necessarily upon the scale of development. Responding to numerous enquiries as to the character and extent of the company's property, we may state that it consists of an extensive series of mines, comprising 9425 linear feet upon a mineral belt of six parallel gold and silver lodes, situated in Scandinavian Canyon, Silver Mountain, Alpine County, California. The salient features of the enterprise as a mining property are—

1.—A mineral belt of six parallel gold and silver lodes, a feature recommending them to every practical miner —2. A mining sett of 9425 linear feet, four times the extent of leading dividend mines elsewhere.—3. True fissure veins of igneous origin and in virgin ground; therefore, geologically considered, inexhaustible deposits of gold and silver ores.—4. The probability that in depth these various lodes may be found to converge into one vast mass of mineral, compact in quantity, and uniform in richness.—5. Titles clear and unimpeachable.—6. Capital extremely moderate in comparison with other prominent mining companies, consequently dividends—apart from the 50 per cent. cash bonus—reckoned as a percentage upon capital indicate by comparison greater inducements to investors.—7. A competent and reliable resident director, who is already thoroughly acquainted with the mines, and has been personally known for many years to the directors.—8. Water and timber sufficient for all purposes, free, except for the necessary labour cost.—9.—Labour readily obtainable, and mining operations not prevented by winter.—10. At Carson City, 50 miles distant, there is the United States Mint, to which bullion can be sent for conversion into coin.

Assays of the ore taken from superficial depths show an average yield of $108 (22*l*.) and $62 (13*l*.) per ton in silver alone. The cost of mining and reduction of this ore into bullion is estimated at about $15 (3*l*.) per ton. Assuming an output of 50 tons per day, and average gross value at only $50 (8*l*.) per ton, this gives $2000, or 400*l*. per day. Deduct (in order to cover all expenses probable or improbable for cost of mining and milling) $20 per ton, multiplying net result by 300 working days, the annual net returns are 94 500*l*., equal to 75 per cent upon the capital. As already stated, these calculations of profits are from the mines alone.

There are mineralogical reasons justifying the opinion that at least one of the veins parallel to the Great Mother lode—called by the experts Big Mother Lode—will in depth become essentially gold producing. Additional testimony upon this important point, as affecting the remunerative future, is afforded by no less an authority than Mr. John Cooper, whose ability and integrity as a mining engineer are vouched for by the eminent firm of Messrs. John Taylor and Sons; moreover, Mr. Cooper's family connections in this country are in themselves an absolute guarantee of good faith.

In concluding this notice, we may refer to one of the most material considerations in an enterprise of this character—that perfect safety for English investors in any foregn mine, remote from home rule, necessarily depends upon the strict integrity, truth, and ability, under all phases in circumstances of the local management abroad. London directors, no matter how respectable or attentive to their duties, are, as a consequence of geographical distance, in some measure circumscribed to administrative functions of a financial character. Ability, economy, and fertility of resource on the part of the executive at the mines are qualities upon which English investors should essentially rely for those profits which the original premises safely warranted. In the case of the Isabelle Company, the directors have wisely selected as resident director a gentleman known to them for many years, and has for a long time resided on the spot, and who would not risk an established reputation unless convinced that a thorough and scientific development of the mines would ensure a remunerative and permanent success.

Each allotted share will receive a cash bonus of 100 per cent.—in other words, practically costing nothing. Its increasing market value becomes, therefore, its actual investing value, regulated by present and prospective dividends. By this standard, based upon the successful completion of pending negociations, the ultimate value of the shares cannot easily be defined.

EXCHEQUER GOLD AND SILVER MINES.

From the numerous enquiries we continue to receive it seems necessary that we should repeat that each 1*l*. share is entitled without payment to a 1*l*. coupon, redeemable by annual drawings from the interest of 10,000*l*. to be invested in the names of trustees in Consols, and by an annual payment from the company of 200*l*.; the first annual payment to be made on November 30, 1880. Shareholders subscribing for these shares will ultimately hold their shares free of cost. The cost may be repaid in 1879, whilst the holder of the last undrawn 1*l*. coupon will in addition receive 10,000*l*. Consols. The old shares should advance in price upon the prospect of dividends being declared by the completion of existing arrangements. The new shares should also advance, because (1) of dividend prospects; (2) because of the large speculative dealings in the coupons apart from the shares, the diminution in the number of the coupons increasing the value of those undrawn; (3) because it by no means follows that the termination will be at a very long date, as the holders may, as they see the number of the coupons reduced, combine and divide the invested fund of 10,000*l*. Consols, yet continuing to draw annually from the company. A holder of Exchequer new shares may, therefore, in a short time receive back the whole of the amount he has paid, failing which he holds a coupon continually augmenting in market value. Meanwhile such developments are likely to be made at the mines as to cause the shares to regain the high premium hitherto commanded.

Safety Lamps.—Mr. J. Williamson, of Hednesford, proposes to construct a compound or double lamp, that is the internal parts with the oil vessel, top, and wires form a complete safety lamp, and the outer gauze or glass with oil vessel, top, and wires form a second, so that if the outer gauze or glass or both are injured the lamp will be safe; also if the inner glass or gauze or perforated cap become defective, the lamp will still be safe to detect an explosive gas, or to use whilst the outer parts are entire. The lamp burns with a steady bright flame in air travelling at a high velocity. In manufacturing this lamp he forms the oil vessel much the same as a Clanny lamp, but the body ring is formed with an air chamber similar to the Stephenson lamp; into this body ring the glass ring is screwed,

and is turned to support both glasses; he drills or forms holes about one-eighth of an inch in diameter all round this ring, and places a band of gauze in front thereof, so that when in position the air passes through the air vessel into the body ring to the glass ring, it then finds its way through the glass ring at its periphery to the under side towards the centre, where it takes an upward current to the flame, and improves the combustion by impinging upon it, the inner glass with its cap reaches to the top of the outer gauze, so as to prevent shake; the outer glass is an ordinary Clanny, the inner one a Stephenson, with perforated copper cap or gauze.

*** With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence: Electric Blasting; Colliery Explosions; the London Coal Supply (W. J. Thompson); Rock-Drills, and Air Compressors (Hathorn and Co., Richard Schram); the Tasmanian Tin Fields (J. Pryor); the Richmond Mine—Messrs. F. W. Mansell and Co.; Richmond Mining Company (R. M. Brereton); Trade Prospects—Tin Mining (G. B. Luke); Wheal Uny; Marke Valley; Legitimate Mining in Cardiganshire—Ynys Mine; Mining in Cardiganshire; Pant-y-Mwyn Lead Mine, Mold, Flintshire (C. T. Hughes); Pant-y Mwyn Mine (Williams and Co.); Llanrwst Mine—Patent Matters—Meetings of Don Pedro North del Rey, Eberhardt and Aurora, Sierra Buttes, London and California, Fortuna, Alimillos, Mellanear, Wye Valley, Gawton Copper; Great Laxey, West Prussian, East Wheal Lovell, and Marke Valley Companies, &c.

TO THE METAL TRADE.

FOR COPPER, TIN, LEAD, &c., apply to—
MESSRS. PELLY, BOYLE, AND CO.,
SWORN METAL BROKERS,
ALLHALLOWS CHAMBERS, LOMBARD STREET, LONDON.
(ESTABLISHED 1849.)

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, OCT. 11, 1878.

IRON.	£ s. d.	£ s. d.
Pig, GMB, f.o.b., Clyde..	2 4 2-	—
,, Scotch, all No. 1 ...	2 6 6-	3 10 0
Bars, Welsh, f.o.b. Wales	5 0 0-	—
,, ,, in London.	5 12 6-	5 15 0
,, Stafford., ,, .	6 10 0-	7 10 0
,, in Tyne or Tees ...	5 5 0-	5 10 0
,, Swedish, London ..	8 17 6-	9 10 0
Rails, Welsh, at works..	4 15 0-	—
Sheets, Staff., in London	8 5 0-	—
Plates, ship., in London	6 15 0-	—
Hoops, Staff.	7 10 0-	—
Nail rods, Staff. in Lon.	6 0 0-	6 15 0
STEEL.		
English, spring	13 1) 0-	19 0 0
,, cast	30 0 0-	40 0 0
Swedish, keg	14 0 0-	—
,, fag. ham.	15 0 0-	—
LEAD.		
English, pig, common	15 10 0	15 12 6
,, ,, L.B.	15 15 0-	—
,, ,, W.B.	16 10 0-	—
,, sheet and bar..	16 15 0-	—
,, pipe	17 0 0-	—
,, red	19 0 0-	—
,, white	24 0 0-	26 0 0
,, patent shot	19 15 0-	20 0 0
Spanish	15 7 6-	—
NICKEL.		
Metal, per cwt	18 0 0-	20 0 0
Ore, 10 per cent. per ton.	24 0 0-	26 0 0
QUICKSILVER.		
Flasks of 75 lbs., ware..	6 17 6-	—
SPELTER.		
Silesian	17 10 0-	17 15 0
English, Swansea	18 0 0-	—
Sheet zinc	21 10 0-	22 10 0

TIN.	£ s. d.	£ s. d.
English, ingot, f.o.b...	60 0 0-	—
,, bars ,, ...	61 0 0-	—
,, refined	62 0 0-	—
Australian	53 0 0-	—
Banca	58 0 0-	(nom.)
Straits	53 0 0-	—
COPPER,		
Tough cake and ingot.	64 10 0-	66 0 0
Best selected	65 10 0-	67 0 0
Sheets and sheathing.	69 0 0-	69 10 0
Flat Bottoms	72 10 0-	—
Wallaroo	68 10 0-	—
Burra, or P.C.O.	67 10 0-	—
Other brands	64 0 0-	65 0 0
Chili bars, g.o.b.	57 15 0-	58 0 0
PHOSPHOR BRONZE.		
Bearing metal	£105	0 0
Other alloys	£110 0 0-	125 0 0
BRASS.		
Wire	7½-1.-	8d.
Tubes	7½	—
Sheets	8¼	- 8¼
Yel. met. sheath. & sheets.	5¼	- 7
Nails composition	8	- 9

TIN-PLATES.*	per box.	
Charcoal, 1st quality ...	1 0 0-	1 2 0
,, 2nd quality ...	0 19 0-	1 0 0
Coke, 1st quality	0 16 0-	—
,, 2nd quality	0 14 0-	0 16 0
Black .....per ton	16 0 0-	16 10 0
Canada, Staff. or Gla., at Liverpool	11 0 0-	12 0 0
Black Taggers, 450 of 14 × 10	30 0 0-	—

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than IC quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—The failure of the City of Glasgow Bank has continued to exercise a depressing influence upon the commercial community generally, by reason of the disclosures of the imprudent system pursued in bolstering up and over-advancing to insolvent firms carrying on an unsound and risky business, as it is thought some other banks may have been doing a similar sort of thing, and further unpleasant revelations may yet have to be made. The credit of good houses suffer on occasions like these, and, therefore, it is undoubtedly better to remain passive until the feeling of suspicion and distrust has subsided. Some forced sales must necessarily take place, but it is believed they will be comparatively limited, and that our markets will soon right themselves again, and go on steadier than before, for any further depreciation cannot continue for any length of time, and consequently holders need not be unduly apprehensive with regard to the future, as there will be a renewal of confidence immediately upon the restoration of order and indications of a revival. The riddance of bad mercantile houses, and the liquidation of unsafe banks, will tend to purify the atmosphere, and prove an immense relief to all legitimate traders hereafter, as they will only have to honestly compete on more equal terms with one another, instead of having to contend with an artificial and spurious combination of mercantile and bank trading and financing. No wonder certain merchants could do such a large business, and eclipse all their neighbours in the extent of their transactions. Until the secret was revealed it seemed unaccountable, but when the final day of reckoning came the mystery was at once explained.

Other merchants with similar facilities could have done as much, and perhaps managed a good deal better, but who could expect to compete successfully with houses having the capital and credit of a bank to fall back upon, but to trade with borrowed capital invariably leads to careless and reckless dealing. It may suit some people when their business fails, as it enables them to struggle on for a few more years, and in the meantime to derive a handsome annual income, but did it ever occur to any of the principals the utter want of principle in doing so, and what would ultimately be the condition and distress of the 300 to 400 female proprietors of the bank, or what would become of the helpless orphans whose little all was at stake, or the poor unsuspecting clericals and professionals. Is it possible for any who stood at the head of affairs to be married men, family men, who when they die may leave widows and orphans, and that the money left in sacred trust for their support if misappropriated by others might in one day render them destitute, and perhaps beggars, for such appears to be the magnitude of the evil and the results of years mismanagement. It is a great pity that the bankruptcy laws are not made more strict, and that bankrupts are not prevented getting off so easily. A man taking credit after he has become insolvent, unless his insolvency is made known to the creditor, is no other than a fraudulent debtor, and a common swindler, and ought to be prosecuted as such, but as the law stands it seems to afford greater protection to rogues and swindlers than to honest men. The bigger the failure the more a man is often thought of, and many houses are believed to break to make themselves.

A bankrupt knows beforehand that he will be let off with impunity, as there is no public prosecutor, and that is what makes him so impudent and unscrupulous; for after the first outburst of feeling on the part of the creditors the opposition gradually abates, and as soon as a certificate is granted the bankrupt often comes out with his cash, and appears a bigger man than he ever was before. Instead of an insolvent firm drawing and reducing liabilities, they frequently launch out more freely, and considerably increase them, and for no other motive than to enable them to make a little pocket for themselves and to blind the great body of creditors, by being able thereby to show a somewhat larger dividend on the whole estate. Commercial morality does not improve under these circumstances, and the laws ought to be made more stringent; for while rogues prosper, honest people suffer. The law made it a fraud for any man to take delivery of goods within three months of his bankruptcy, and it is a pity that such a wholesome rule has been allowed to become obsolete. Some alteration is very necessary to protect honest sellers from dishonest buyers, for business cannot be conducted without giving some little trust, and the best way to preserve the character of the community is to render fraudulent debtors (and all debtors taking delivery of goods within three months of suspension or after insolvency should be considered fraudulent) liable to incarceration and transportation; but proceedings against the guilty should not be left to the tender-hearted creditor, but form part of the duty of a public prosecutor. Creditors are far too ready to compromise, and to save themselves from exposure wish to hush up affairs of this kind; but we want to see the honour and integrity of the country maintained, and all offenders who fail to repay what they have borrowed upon credit or otherwise should be punished with the utmost rigour of the law.

COPPER.—As the terms of payment for foreign and English copper and Yellow Metal are now so very stringent, the former being cash against warrant, and the latter cash against handing mate's receipts, there can never be any serious loss to the seller in consequence of the failure of a buyer. The most a seller can suffer is the depreciation in market value, and the inconvenience in a dull market of finding another buyer, but in a market like the present, when the depreciation has already been so great, and the price at the principal sources of supply is most positively asserted to be below cost of production, there can be very little fear of running much risk of a loss; at the same time, when a failure of such magnitude as that of Messrs. Smith, Fleming, and Co. is announced there would naturally be hesitation on the part of buyers to make purchases, and, therefore, contracts which have been entered into by that firm and remain unexecuted, or where delivery has been interrupted, the seller must be content to hold back until this unfortunate affair has blown over. A feeling of uneasiness, however, still exists with regard to the standing of some other firms, and it would be very strange indeed if a few suspensions did not follow, but the liabilities of Messrs. Smith, Fleming, and Co. are said to be chiefly abroad, or with the Glasgow Bank. Should this be so, the sooner a list of creditors is published the better, for it would allay further anxiety and uneasiness. In any case, our market is not likely to suffer more than a temporary depreciation arising from depressing influences, which will vanish like a flash of lightning upon the earliest indications of a revival and the restoration of confidence. These are the times to meet with bargains when weak holders are forced to realise, but it must not be forgotten that those who hold the largest stake in copper are all very wealthy capitalists, and will certainly not sacrifice their property by forcing sales at a critical and unpropitious period like the present. As soon as ever the weak lots are cleared off the market prices will be higher, for the weak element will then be stamped out, and there will be little or nothing to prevent the market going ahead again. The copper is chiefly in first hands, and there is no doubt that importers have profited by the past, and endeavour to persuade producers to reduce supplies, so as to afford time and opportunity for existing stocks to be worked off: 250 tons Cape ores of 31 per cent. produce has been sold this week at 11s. 4½d. The Swansea sale of ore on the 8th inst. realised 10s. 2d. for 8¼ per cent. produce, against 9s. 5¾d. for 7 9-16 per cent. on the 17th ult. From New York, Sept. 28, Lake Superior is quoted 16 to 16¼; demand steady, holders firm.

IRON.—It is said that the failure of the Glasgow Bank does not involve or affect many in the iron trade, as its advance upon warrants were comparatively light. This is extremely fortunate, for although the price of pigs fell to 43s. 6d. upon the announcement of the stoppage, yet that is nothing in comparison to what it would have been if it had turned out that the bank held largely of these securities. The recovery which has since taken place in the market may be considered and treated as a confirmation of the statement, but although the iron houses may have escaped from direct losses, it must necessarily follow that they will suffer indirectly, for a failure of a large bank in the midst of them cannot take place without inflicting injury upon some few, besides causing great inconvenience and a general curtailment of business. The condition of the iron trade is quite bad enough without having to sustain any fresh burdens of an exceptional character. The trade is still declining, and ironmasters, no doubt, find it hard to bear with the pressure of the times, which is daily increasing, and the season is now so far advanced that we fear it is hopeless to look for any solid improvement until next year. The price of iron will have to be reduced, and this of course causes a reduction in wages. It is most distressing and painful to have to be continually cutting down the men's remuneration; but there is evidently no help, and they can easily judge for themselves that present prices bring them very little work, and that something must be done to mend the matter. They had better yield with a good grace, for half a loaf is better than none at all, and this is what the trade seems to be coming to; if the miners will not work longer and cheaper they will find in a little time there will be no employment left for them. It is not the competition among themselves, but the competition of foreigners which they have most to fear; if others will work cheaper they must do the same.

The trade has drifted into such a deplorable state, and there is no appearance of any change for the better, but rather the reverse, that it is impossible to maintain former prices, and unless the men are willing to accept a lower scale of wages the sooner they prepare and obtain other employment the better, for it is useless to go hoping when there is not the slightest prospect of realising those hopes. If the men positively decline to work at cheaper rates than before many of the works will have to close altogether, and the men will then be left to their own resources, and have to take anything that offers. They had much better work for their present masters, who are their truest and best friends, and follow their advice. The question of labour and capital is, doubtless, a very difficult one, or at least made to appear so, and suitable terms are difficult to arrange in a just and equitable manner. The masters, of course, are mostly responsible men, and could be held to their agreements, but what is to prevent the men from backing out? They might cease working at any moment, and leave the neighbourhood when it suited them no longer to work on the agreed terms, but the sliding scale might at any rate be tried, and perhaps it would be found to answer better than expected. The terms must be reciprocal, just, and equitable; everyone must make concessions, and assist in reconstituting the trade. It will occupy time, and require a great deal of patience and forbearance, but we should not doubt of ultimate success. The work has to be accomplished, and the sooner it is taken in hand the better for all parties. If the agreements are entered into with the Trades Unions they might have greater hold upon the men, the terms and conditions are being set forth and fairly discussed might be reduced and modified, so as to effect an amicable settlement. The subject must be taken up in earnest and without delay, and we are surprised that it should have been left so long neglected. We cannot urge upon the trade too strongly the necessity of keeping prices down, so as to defeat the competition of foreign countries; when Belgium relinquishes her hold upon our market then a better state of things may arise, but not until then can there be any durable progress.

The enemy must be faced, and delay in attacking is only so much extra loss to us. She must not only be attacked, but defeated, and our departed glory will then return, and England's renown as the cheapest and best producer of iron will spread abroad, and soon bring work again to her mills. On the 7th inst. a meeting of the South Staffordshire Iron Trade Wages Board was held in Birmingham to consider the question of wages. Mr. Chamberlain, the president, is reported to have taken the chair. Mr. Hunt, an employer, spoke in favour of a further reduction in wages, alleging as a reason that trade was extremely bad. In January last employers asked that puddlers' wages be reduced 7½ per cent., leaving them at 8s. per ton, but it was necessary that this should be still further reduced, and masters asked for a fixed rate to be arranged, so as to settle the question. They regretted having to make the demand upon the men, but the state of trade demanded it, and over which they had no control. The men's delegates expressed astonishment at the proposed reduction. It was, they urged, evident that masters were determined to take unfair advantage of the present depression of trade, and any further reduction would press with cruel and needless severity upon the men. Mr. Chamberlain promised to give his decision at the end of this week, and it is said that his remarks indicated an alteration in wages. We will not anticipate what Mr. Chamberlain's decision will be, but we know what it ought to be. At the same time, whatever it may be, it only deals with one part of the question, and we think it is an essential part, but the whole question requires revision. The rents ought to be reduced, and the terms and conditions of leases revised, and if the men on their part agree to accept a reduction of wages (say) to the extent of 10 to 15 per cent., the owners and landlords ought to make an equivalent reduction to enable the ironmaster not only to lower prices to the extent of the reduction in wages, but also to add to it the concessions of the landed and mine proprietors. If every one, for a time at least, will go upon the plan of making mutual concessions, it would make it easier for all to bear, and there would be less dissatisfaction expressed. The trade must be brought back to the country, and it can only be done by underselling others, as they have been and still are underselling us.

The accounts from all parts of England this week are decidedly unfavourable, and very few orders have been given out. The Sheffield market is said to be nearly stagnant, and the Middlesborough market has been greatly excited, and prices 6d. per ton lower—37s. 6d. for No. 3—on account of the fall of Scotch pigs, which will probably make some difference in the shipments to Scotland. Such a sudden turn may be unexpected, but it is what ought to have taken place long ago. The Scotch houses certainly ought to be able to supply themselves with all their requirements at quite as cheap a rate, if not cheaper, than Middlesborough. There is nothing particular to report in common Welsh or Cleveland bars, makers are not indisposed to concede 2s. 6d. per ton to secure good orders, but there are no such enquiries, and the extent of the orders are remarkably limited. Swedish bars have been more freely offered, owing to the failure of the Indian merchants. In Scotch pig there has been a slight change for the better, and the market opened very much better at the beginning of the week, and advanced to 45s. 3d. cash, but this was not long maintained, and the price soon relapsed to 44s. 9d., and has continued to drop to 44s. 2d. cash, which is to-day's quotation for mixed numbers.

SHIPMENTS.

For the week ending Oct. 6, 1877	Tons	10,654
For the week ending Oct. 5, 1878		10,160
Decrease		494
Total decrease for 1878		54,934
Imports of Middlesborough pig-iron into Grangemouth:—		
For the week ending Oct. 6, 1877	Tons	6,896
For the week ending Oct. 5, 1878		6,825
Decrease		71
Total increase for 1878		1,824

FURNACES.

In blast Oct. 6, 1877	87
In blast Oct. 5, 1878	90

TIN.—The price has continued to drop, and the market has undergone a pretty considerable amount of battering by the "bears," and timid holders, in their fright, have hastened and increased the depreciation of their own property. When prices were much higher holders had a great deal more confidence in the stability of the article; but now that prices are much lower they seem to have lost all confidence, and no sacrifice is too great for them. The market has received a severe shaking on account of the feeling of mistrust occasioned by the recent failures, and so the "bears" have it all their own way, and are driving holders very hard, and those who are already under heavy advances will, doubtless, feel the pinch, for the difficulty of providing sufficient margins for financiers is not a very easy task to everyone at the present time; but, although financiers are, probably, only exercising proper precaution in asking to be covered against a further fall, yet they ought not to press too severely upon borrowers. Even with a small margin their position is safer now, perhaps, than before, and they can afford to be patient. The reaction will be brought about quicker on account of the fall than would otherwise have been the case, for it will, no doubt, check supplies coming forward; and if the supplies are smaller the stocks here will also, no doubt, become smaller, and the price will then rapidly advance once more. The stock for months past has been remarkably uniform, and has not increased, and the statistical position throughout is not less favourable. The demand for tin has unwonderfully increased, and the exports are about double to what they were a year ago. The low price will bring in a host of buyers presently. By the mail from New York (Sept. 28) the market for both Straits and Australian was reported firmer, and a better feeling prevailing prices had a hardening tendency, and there was less disposition to sell unless an advance could be obtained upon previous prices.

QUICKSILVER is unchanged, at 6*l.* 17s. 6d., and firm. The Californian market continues animated, in consequence of large purchases for Chinese account.

LEAD dull, at a decline of 2s. 6d. per ton. TIN-PLATES very quiet.

THE IRON TRADE.—(Griffiths's Weekly Report).—Friday evening. The Glasgow market opened this morning at 44s. 1½d. cash, and remained steady all day, closing with sellers at 44s. 2d. This is about 4d. lower than the price last Friday, when warrants closed at 44s. 6d. We quote makers' No. 1 iron:—Gartsherrie, 53s. 6d.; Coltness, 56s.; Calder, 54s.; Langloan, 56s.; Summerlee, 52s. 6d.; Monkland, 47s. f.o.b. Glasgow; Glengarnock, 52s.; Eglington, 47s., f.o.b. Ardrossan; Shotts, 56s., f.o.b. Leith. The Birmingham Quarter day was held on Thursday last in the Birmingham Exchange. The meeting was large and influential. All districts except Barrow and West Coast were well represented. The intimation given under this head last week that late prices both of pigs and finished iron were to remain unchanged was endorsed by the meeting. No change was declared in any kind of iron. The reports from the manufacturing districts were not generally of a cheering character.

The failure of the City of Glasgow Bank has engendered the greatest caution in iron circles, not because iron interests and ironmasters are in any way involved in this failure, but the more because it is generally known that failures will be announced of one or two large mercantile houses, and the ironmasters evinced considerable anxiety to know the extent and consequence of the stoppage of these firms, which we are glad to say are in no way connected with the iron trade. There was a fair business done on the Birmingham Exchange in finished iron—"B.B.H," "The Mitre," and "The Lion" brands were in good demand, and the usual quarterly contracts were given out for all these brands. Some very good orders were also given out to John Dawes and Sons, of Bromford, by both local and London buyers. Robert Heath and Sons' "Crown" bars were also in request, and claimed the attention of buyers. Boiler-plates, even of the best makes, were not as keenly looked after by buyers as usual. Some good orders were given out for sheet iron for galvanising purposes, and Noah Hingley and Sons booked some large orders for their best iron on London account. There was a large business done in second-class bars at late prices. In the raw material only a moderate business was done,

A large parcel of Middlesborough No. 4 pig-iron was sold on this Exchange at 37s. per ton f.o.b., subject to the usual 1 per cent., &c. This was the only sale of Middlesborough iron of any importance that took place. A sale of 2000 tons of Frodingham iron was also reported (Appleby), but the sale of best mine pigs of Staffordshire make was by no means large. There was no change made in the price of Shropshire pigs. We are unable to state the quantity sold at this Quarter Day. With regard to North Staffordshire, Apedale were held firmly at late prices; probably only a moderate business was done in this brand. Earl Granville's Etruria were sold to the usual customers; but stocks being low here, late prices were maintained in all cases. Robert Heath and Sons' pigs often changed hands at late prices. The award of Mr. Joseph Chamberlain was expected to declare a reduction in puddlers' and millmen's wages. It was reported that coal was in better demand; price unchanged.

The tin-plate makers from Wales and other districts attended the meeting in large numbers, but as tin plates were a little stiffer in price buyers were not eager to go into large purchases, on this account very little business indeed was done, even in coke plates. Our market has been like this all the week. Copper has suffered in value, and the Metal Exchange registers a fall of 1*l.* per ton in Australian and Straits this week. The price to-day is 53*l.* for the latter sorts, spot.

Messrs. FRY, JAMES, and Co.—Our markets have been unfavourably influenced by the failure of the City of Glasgow Bank, and the other houses whose stoppage has followed, and all prices have given way.——COPPER.—In Chili bars prices have gradually given way until a reduction of fully 30s. per ton has been established, and at quoted prices it is difficult to sell. Australian sorts are quiet, and have not suffered to the same extent.——IRON.—In Scotch pigs as low as 43s. 6d. per ton was touched for warrants, since which there has been a rally, and the market closed yesterday at 44s. 7½d. Other descriptions are unchanged.——TIN has participated in the general drop, and fine foreign has been sold down to 53*l.* 5s.——SPELTER is quiet, and also lower in price.——TIN-PLATES unchanged.

The MINING SHARE MARKET has shown no great change this week. Shares generally are depressed, and prices merely nominal.

TIN is rather weaker, but the smelters, at their meeting on Monday, made no alteration in the standards for ore. Tin mines are utterly neglected. At East Lovel meeting a call of 15s. per share was made. The accounts, which were for six months, showed a balance against the mine of 1602*l.* The tin sold in the six months realised 500*l.* Carn Brea are quoted 27½ to 32½; Dolcoath, 22 to 24; East Pool, 8½ to 9; Penstruthal, 4s. to 6s.; South Condurrow, 10 to 11; South Frances, 4½ to 5; Tincroft, 5 to 7; Wheal Agar, 3½ to 4; Wheal Grenville, 1½ to 2; Wheal Peevor, 5⅜ to 6¼.

COPPER MINES remain unchanged, and are without business. The production of copper ore is decreasing in this country. In the quarter ending Sept. 30, 1877, the quantities sold at Cornish Ticketings was 14,111 tons, realising 53,320*l.* In the quarter just ended the quantity sold was 11,463 tons, realising 39,397*l.*, being 2648 tons—3923*l.* in money—less than the corresponding quarter of last year. The average price of the ore this quarter was 3*l.* 8s. 10d. per ton.

Mellanear, 3¾ to 4; at the meeting, on Tuesday, the accounts presented showed a profit on the half year ending June 30 of 202*l.*, which, added to balance of profit left over the previous half-year, made a balance of 2243*l.*, out of which a dividend of 3s. per share (1500*l.*) was paid in July; 202*l.* carried to reserve fund, which now stands at 350*l.*, and 200*l.* written off preliminary expenses. The price obtained for the copper ore was less by 14s. per ton than the previous year. The mine is looking well, with an unexpended capital of 5000*l.*, and ores in reserve estimated at 13,964 tons. Devon Great Consols, 1½ to 2; Parys Mountain, 5s. to 7s. Morfa Du, ¾ to ⅞; the lode continues rich here for bluestone. South Caradon, 50 to 60; West Seton, 7 to 9; West Tolgus, 47 to 49.

LEAD MINES partake of the general dulness, and prices for the most part are nominal only. Great Laxey, 17 to 18; the dividend for the quarter here is only 6s. per share, owing to the low price of lead. Roman Gravels, 6¾ to 7¼; the 65 south has improved to 2 tons of ore per fathom. The sampling for the month is, as usual, 180 tons. Van, 17 to 18. East Van, 2¾ to 3¼; no change in the report here. South Darren, 2 to 2½; they have begun to drive the 100 east and west of winze, worth respectively 38*l.* and 45*l.* per fathom; when a communication is made with the shaft in this level there will be a very valuable piece of ground opened, from which the returns will be increased. The 90 end is worth 50*l.* to 60*l.* per fathom, and the three stopes in this level 40*l.*, 25*l.*, and 50*l.* per fathom. The stopes in the 80 are worth 20*l.* and 6*l.* per fathom. They have sold 40 tons of silver-lead ore for the month, at 15*l.* 1s. 6d.=603*l.*

Tankerville are not quite so strong, at 3⅞ to 4⅛; the 206 west is worth 1½ ton per fathom. The 206 south is worth 1¾ ton. Five stopes in back of this level east and west are worth in the aggregate 8 tons lead ore per fm. Grogwinion, 2¾ to 2½; Rookhope, 10s. to 12s. 6d.; Tyn-y-Fron, 1⅜ to 1⅝; West Chiverton, 3½ to 4½, Leadhills, 2 to 2½; the 20 south of No. 2 winze on Rake vein, at Reid's shaft, is worth 7 tons of lead ore per fm.; 2 ft. above the bottom 6 tons, and back 3 tons, making an average of 4½ tons per fathom. D'Eresby Mountain, 40 to 50 per 1024th; Aberllyn, 10 to 12; Clementina, 1½ to 1⅝. D'Eresby Consols, 9 to 11; a great change has taken place in the cross-cut towards the Cobblers' lode. There is a large vugh, making the progress much easier, at the same time that it is a good indication for lead. Pateley Bridge, 3¾ to 4½; the produce for September was 45 tons of lead ore, worth 450*l.*, at a cost, we understand, of less than 350*l.* West Pateley, 1⅜ to 2¼.

West Tankerville Mine, upon which Mr. Walter Eddy reports very favourably, is to be worked under the name of East Roman Gravels, and a reconstructed company, in 30,000 shares of 1*l.* each. Of these 12,000 will be allotted to the holders of preference shares in the old company, and 6000 (with a bonus of two shares each) to the public at 1*l.*, so that with the bonus shares the prices will be 6s. 8d. each. The ordinary holders in the old company get nothing. Wye Valley, 2 to 2½; West Wye Valley, 2¼ to 2⅜; Caron, 2 to 2½; Hartington Moor, 1½ to 2; Mawston, 60 to 65; Red Rock, 2 to 2½; Sf. Harmon, 2½ to 3; South Cwmystwith, 2½ to 3.

FOREIGN MINES.—Blue Tent, 2¾ to 3; Hultafall, 3 to 3½; Cape Copper, 29 to 30; Colorado, 2¾ to 3; Don Pedro, 10s. to 12s.; Eberhardt and Aurora, 3⅜ to 4½; Santa Barbara, 1⅜ to 1⅝; Pitanqui, par to ¼ prem.; Flagstaff, 7s. 6d. to 12s. 6d.; Frontino and Bolivia, 2¼ to 2½; Last Chance, ¾ to 1. West Prussian, 10 to 10½; the accounts for the end of the year ending June 30 show gross profits of 16,716*l.*, and a balance of 13,373*l.* After payment of preferential dividend of 8 per cent., and 4200*l.* to the A shareholders, a balance of 2000*l.* is added to the reserve fund, and 2773*l.* carried over. Javali, 7s. 9d.; New Zealand Kapanga, 1⅜ to 1⅝; New Quebrada, 1¾ to 1⅞; Port Phillip, 10s. to 12s. 6d.; Richmond, 9¾ to 10¼; St. John del Rey, 270 to 280.

The Market for Mine Shares on the Stock Exchange has remained in the same condition as reported last week—there is extremely little bona fide business doing, and quotations are altogether nominal. It appears to be generally felt that the lowest price for most metals has been reached, and that there are plenty of mines which can, even at present prices, be made to remunerate the shareholders as soon as low rates have existed long enough to drive the worthless ones into the winding-up courts or otherwise out of the market. In the case of the Staffordshire iron trade the arbitrator's award has been made known this afternoon—a reduction of 5 per cent., or 6d. on the ton, for puddling is to commence on Oct. 21, and the rate of wages now settled is to be subject to re-consideration by the board at any time upon one month's notice being given either by employers or employed. As this difference is too small to affect the price to the consumer, but will in some cases relieve the manufacturers from loss, the award is regarded as favourable to iron companies. With regard to lead, the proceedings at the meetings of the Linares, Alamillos, and Fortuna Lead Mining Companies show that in those cases profits can be made and dividends paid with present prices, and the same may be said of the Great Laxey, where a dividend of 6s. per share, free of income tax, was declared on Wednesday. The West Prussian Mining Company is also able to put forward a favourable statement. The accounts for the year ended June shows an available balance of 13,373*l.*, which

is sufficient to pay the 8 per cent. dividend on the preference shares, 3 per cent. on the ordinary shares, and, after adding 2000*l.* to the reserve fund, leaves 2773*l.* to carry forward. In British mines there has not been a single transaction to-day, and in foreign the dealings have been very limited. Colorado United have been done at 2⅞ and 3; Eberhardt and Aurora, at 4 1-16th and 4; Richmond at 9⅜, and subsequently at 9⅜ and 10; the mine looking excellently well, and promising to prove a permanently lasting property. Transactions have also taken place in Rio Tinto bonds and shares; and in Plumas Eureka, United Mexican, and Yorke Peninsula.

Although the depressed condition of the metal markets has, no doubt, done much to restrict mining enterprise, the evils resulting from continued low prices of metals are trifling compared with those attributable to the want of integrity on the part of directors and managers, and to the introduction of the premium purchase system, the bonus share system, and of various other mysterious financial systems which promise fabulous advantages to investors, but which upon examination are found to involve impossible conditions—that is to say, the capitalists can only hope for the benefits promised upon the occurrence of contingencies, which, according to reasonable judgment, are very unlikely to happen, or that the promises made are such as upon the face of them are unreliable. As a contrast to these objectionable and dangerous systems it is refreshing to observe that the good old principle which gave shareholders profits and permitted mining to prosper has been revived by Messrs. John Taytor and Son, of Queen-street place, whose names are honourably known in all the mining districts of the world, and it is still more gratifying to learn that the revival has proved a thorough success. The property upon which the revival experiment has been tried is the Buena Fortuna, or Good Fortune, property, with the adjacent pertencias of Demasia and Capricho, in the celebrated district of El Llano de las Infantas, and not far from the Los Salidos property of the Fortuna Company in Spain. The purchase is made in bona fide on behalf of the Buena Ventura Company direct from the original vendors, and promotion money of any kind has or will be paid, consequently the total cost to the shareholders is something less than 1200*l.*, and it is considered that about 15,000*l.* will be sufficient capital to work it. The company was, therefore, formed with 10,000 shares of 2*l.* each, and Mr. Richard Taylor was able to announce at the Fortuna meeting, on Thursday, that 8200 out the 10,000 shares had been subscribed for, so that they were placed in possession of ample resources for developing the mine, and that there was every reason to suppose that by the time they were ready to bring lead into the market the price of the metal would have so improved as to yield them handsome profits. It is stated that the mine has already produced ore in paying quantities, and that the lode appears to be productive almost the entire length of the sett. No operations of importance have been carried on below the water level, as the owners had no means to erect pumping machinery. The directors are those of the Linares, Alamillos, and Fortuna companies, and Mr. Charles Tonkin, the superintendent of those companies in Spain, will superintend. He states that the mine is well situated for economical working, and one good rotary engine, erected on a site to be carefully selected, would pump the water, wind the stuff, and finally drive a crushing-mill. So that, with a lode of great promise, and surrounded on every side by productive mines, he may venture to say that their chance of success is very great.

St. John del Rey, 270 to 280; the latest telegram received, Oct. 10 (having been repeated because unintelligible), states that the produce for the second division (10 days) of September was 10,750 oits., of the value of 4165*l.*, the ley of the ore being 5·8 oits. per ton, or 7·8 oits. per ton by the old measurement. The water is very short. Some surprise is felt that no statement with reference to the Cata Branca blacks, alleged to be illegally held in slavery by the company, has been made either by Mr. Hocking or the board, and the more so as it is generally considered that neither Mr. Hockin nor the board are personally at fault in the matter. If the charge against the company be groundless, it is one that could readily be disproved, and the absence of the disproval leads many to assume that the allegations are true. The fall of 10*l.* in the company's stock during the week is also attributed to this slave question, although it may be due to quite another cause. These are matters which only Mr. Hockin or the board can clear up, and as it is to the interest of the shareholders and of humanity that an exact statement of the case should be made public, it is most desirable that the questions asked in last week's *Mining Journal* should be categorically answered. The mere idea of an English company paying dividends to its shareholders out of money earned by using as slaves those who should be free, is too horrible to contemplate, and the necessary contradiction or explanation should, therefore, be at once given.

Richmond, 9⅜ to 10¼; the advices from the mine continue to announce increasing improvements at the mine, and every confidence is felt that future workings will even exceed any that have yet been carried on in remunerativeness to the shareholders. The discoveries recently made leave no doubt as to the continuation of the ore deposits both in length and depth, and this is really all the shareholders need desire. The directors announce that they have determined to reconstruct the company's furnaces, and have instructed Mr. Rickard to carry out the works without delay. The proposition to rent the Atlas furnaces during the reconstruction has been abandoned, as the board have come to the conclusion that the saving of waste by smelting at their own works will fully make up for the delay in the reduction of the ore. A telegram has been received stating that 120,000 bushels of charcoal, valued at about $35,000, were destroyed in the late fire. The compressor is working, and the mine is improving.

Colorado United, 2½ to 3; a telegram received on Thursday states that the cash and ore broken for shipment (September product) was $20,000. The mine is looking exceedingly well. The screen cloth had arrived, and the mill is working admirably.

The latest advices from the Comstock Mines state that "the majority of stocks keep wonderfully firm, and those who have been looking for a decline have thus far been disappointed. Many of the mines have their dead work done, and are cross-cutting or preparing to do so, and, even had there been no development in the Sierra Nevada, there is but little doubt that the shares in these mines would have been strong, as there is a general belief that in some of them bodies of good ore will soon be met with. It is more than likely that within the next two months some rich discoveries will be made to the south as well as to the north. The so-called 'big' bonanza suit, which was referred to in the *Mining Journal* some weeks since, has been summarily disposed of, as all who knew anything whatever of the circumstances knew full well would be the case. 'Speculator,' who probably never owned a share in the bonanza stock in his life, sought to recover $35,000,000. There never was any real merit in the pretensions of the suitors, and it took Judge Dangerfield but a very short time to see the true inwardness. The suit was summarily dismissed. It is becoming the ruling legal principle that those who have the enterprise to pay the cost of developing mines should enjoy the profits of success in peace."

Hultafall, 3 to 3½; the machinery sent out for the perfecting of the lead and blende dressing has arrived at the mines, and it is expected will be at work next week.

Lead Mines have been rather firmer, but without material change of quotations. Van, 17 to 18; the ends in the 95 and 105 west are looking splendid. Other points as last reported. The usual quarterly dividends (5*s.* per share) has been distributed during the week. Grogwinion, 2¼ to 2⅜; the manager's monthly report states that the bottom levels continue to open up satisfactorily in Nos. 3 and 4 lodes, and that good progress is making elsewhere. Wye Valley, 2 to 2½; at the meeting, on Monday, a very satisfactory account of the mine was given by the manager, who stated that within the next six months two very important points would be reached, which would, in his opinion, prove the success of the mines and yield large profits in the future. West Wye Valley, 2¼ to 2¾; the lode at the 40 is very productive, and is considered likely to further improve. The rise above above the 52 is improving, and going into a rich bunch of ore. Other points are looking well: 40 tons of lead were sold for September, and a similar parcel is being got ready for the current month.

Caron, 2 to 2½ cum div.; the half-year's dividend warrants were posted yesterday. The mine continues to progress satisfactorily, and good reserves of ore are being accumulated. The stopes are looking well and improving, and the new dressing machinery is working efficiently. A parcel of lead will be sold shortly, and will be the commencement of regular returns. Saint Harmon, 2¼ to 3; the lode has not yet been intersected by the new cross cut at the 67, but it is likely to be soon reached, as the ground shows very favourable indications, and early discoveries may, therefore, be expected. Other points are looking well.

South Cwmystwith, 2¼ to 3; the report states that a very nice improvement has taken place at the intermediate level, and also on the Penguilan lode in the deep adit. There is more ore visible than for months past, and prospects of further rich discoveries at an early date are promising. Red Rock, 2 to 2½; the prospects here continue to improve, and a great deal of rich ore ground is being opened up both in the bottom of the mine and at the 10 in the new shaft. This shaft is now being sunk for a new level in promising ground, and bids fair to open up a deposit of mineral quite equal to the splendid discoveries made in the early days of the old mine when worked under the name of Graiggoch. The sale for last month was 40 tons, and a further parcel will shortly be ready.

Pant-y-Mwyn shares are quoted at 5 to 5¼; violent fluctuations are reported to have taken place in the price of these shares during the early part of the week, owing to a lot having been offered for sale at a price considerably below the quotation, but when applied for few were to be had except at a higher price. The latest reports from the mine are very cheering.

Mineral Corporation, 10 to 11; Hafna Mine continues to look extremely well. Work in all the levels is being rapidly proceeded with preparatory to the reception of the drills, and the new lode in No. 4, or deep adit, looks good both east and west.

Fateley Bridge, 3¼ to 4¼; the monthly report appears in another column. The 30 east, on Rake vein, is improving again, now worth 1 ton of lead ore per cubic fathom. Many fathoms of rich ground, whole to the horse level, have been opened on the vein during the past few months. The working for the month will leave a profit. West Fateley, 1¾ to 2¼; the report appears in another column.

British Silver-Lead, 3 to 4: No. 1 or old shaft will soon be cleared to the bottom, and stoping below the 10 yard level will be commenced. The 10 yard level, west of old shaft, has been cleared to the forebreast; the vein is 3 ft. wide, and worth 2 tons of rich silver lead ore per fathom. No. 2 shaft continues to be sunk in a splendid vein, which increases in width and value as depth is obtained, and it is the opinion of all who have visited this property that a rich mine will be opened out in depth.

Subjoined are the closing quotations:—

Assheton, ½ to ¾; Devon Great Consols, ½ to 1 prem.; ; East Caradon, ¾ to ⅞; East Van, 2½ to 3; Great Laxey, 16½ to 17½; Hingston Down, ½ to ⅝; Leadhills, 1½ to 2½; Marke Valley, ⅜ to ½; Parys Mountain, ½ to ⅝; Fateley Bridge, 3¼ to 4¼; Penstruthal, ½ to ⅝; Roman Gravels, 7 to 7½; Tankerville, 3¼ to 4¼; Tincroft, 6 to 7; Van, 17 to 18; West Assheton, ½ to 1; West Chiverton, 3 to 5; West Pateley, 1¾ to 2¼; Wheal Grenville, 1½ to 2½; Almada and Tirito, ¼ to ⅜; Birdseye Creek, ½ to ¾; Blue Tent, 2¾ to 3; Cape Copper, 29 to 30; Cedar Creek, ½ to ⅝; Chontales, ½ to ¾; Colorado United, 2⅝ to 2⅞; Don Pedro, ½ to ⅝; Eberhardt and Aurora, 3⅞ to 4 1-16; Exchequer, ¼ to ½; Flagstaff, ¼ to ½; Frontino and Bolivia, 2¼ to 2½; Hultafall, 3 to 3½; I.X.L., ½ to ⅝; Kapanga, 1½ to 1⅝; Last Chance, ⅜ to ⅝; New Quebrada, 1½ to 1¾; Oregon Pref., 2 to 2½; Pesterena, 4*s.* to 6*s.*; Placerville, 2¾ to 3; Plumas Eureka, 2½ to 3; Port Phillip, ½ to ⅝; Richmond Consolidated, 9¾ to 10¼; St. John del Rey, 270 to 280; Sierra Buttes, 1½ to 1¾; United Mexican, 3¾ to 4¼.

COLLIERIES.—The failure of the Scotch Bank, and rumours of consequent weakness amongst many concerns which were formerly considered sound and prosperous, has thrown such a gloom over all stock markets that it is not to be wondered at that colliery shares are dull. In fact, scarcely any business has been recorded in them during the week. Yet the terrible collapse as such a concern as the City of Glasgow Bank, and the reports, probably in many cases true, of the tottering condition of other financial undertakings, should have the effect of diverting the attention of investors to the security and profits offered by the shares in industrial concerns such as collieries. It may safely be asserted that throughout the history of colliery enterprise no catastrophe has fallen upon holders of this class of shares in any way proportionate to that which has visited the members of this Scotch Bank, and of many other financial companies, whose complete collapse has brought utter ruin on those interested in them. At all events, it is quite certain that those who have invested, or may in future invest, in sound and legitimate collieries can never suffer as bank shareholders may. Trade may be bad from time to time, and profits may diminish in consequence, but a colliery represents capital, and cannot suddenly disappear. We think that the present moment, and the present state of affairs, point most conclusively to the fact that industrial operations are in every respect the safest channel into which investors can put their funds.

Political uncertainty still exercises a baneful influence on the coal and iron trades, and reports from all districts are consequently unsatisfactory. Coalowners are, however, grumbling more at the slow improvement than at the actual condition of business. In some markets, indeed, there is plenty doing, though prices still keep low; this cannot, however, last for very much longer, and those who take advantage of the—in many cases—absurdly low quotations of colliery shares will reap a rich harvest from the great rise in prices so soon as trade shows signs of more rapid improvement. There is little or no change to report in prices in consequence of the paucity of transactions. Chapel House ordinary shares remain at 3 to 3½, and ditto preference at par. A few of the debentures have also changed hands at par. The company's new works are now approaching completion, and so soon as the second shaft is down to the Arley Mine the promised output of 1000 tons per day will probably be realised. Ynisedwyn shares are held firm at par (10*l.*); the company's agent continues to get orders at good paying prices. Newport Abercarne are at 4 to 4¼; New Sharlston 3 to 4; Cardiff and Swansea, ½ to ¾; Thorp's Gawber, 1½ to 2.

At the Swansea Ticketing, on Tuesday, 1090 tons of copper ore were sold, realising 4730*l.* 6*s.* 6*d.* The particulars of the sale were—Average standard for 9 per cent. produce, 76*l.* 8*s.* 6*d.*; average produce, 8¼; average price per ton, 4*l.* 6*s.* 9*d.*; quantity of fine copper, 93 tons. The following are the particulars of the two last sales:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Sept. 17	1403	£73 15 2	7 9-16	£ 3 11 10	9s. 61	£47 8 5
Oct. 8	1090	75 8 6	8½	4 6 9	10 2	50 16 8

Compared with the last sale, the advance has been in the standard 2*l.* 13*s.* 4*d.*, and in the price per ton of ore about 4*s.* 6*d.* There will be no sale on Oct. 22.

Telegram.—The Cornish smelters have to-day reduced the tin standards 2*s.* per cwt. The schooner Integrity, of Aberystwith, which was wrecked last night at St. Agnes, Scilly, was got off to-night and towed to St. Marys.

ISABELLE COMPANY.—The subscription list was closed at an earlier date than that in the first instance announced, more than double the amount of capital asked for having been subscribed. Letters of allotment and "regret" are, we understand, in course of post.

EXCHEQUER GOLD AND SILVER MINES.—As notified by the directors in an advertisement in another column, the subscription list will close on Monday. The scheme, which is an entirely novel one, has, it is understood, proved a complete success.

RICHMOND (from a Correspondent).—Shareholders should be informed that their mine at the present time is far more valuable than at any period during its existence. Immediate results will attest the accuracy of this information.

VIRNEBERG.—The manager reports this week an improvement in the 140 metre level, the lode north of cross-cut, south of shaft, being now worth 20*l.* per fathom for copper ore. This is a good sign, as the 140 is the deepest level yet driven. In the 120 metre level also the lode is opening out again, and is now valued at 12*l.* per fathom. There is evidently a fine section of ground above the 120 and below the 140 south still untouched. The other parts of the mine are all in good ore ground. A parcel of copper ore, of about 170 to 180 tons, is now being shipped for Swansea. This shows an increase in the returns, which will probably be fully maintained until completion of the new dressing-works, when the large piles of ore at surface can be at once advantagously treated.

PATELEY BRIDGE—GREAT DISCOVERY.—The managers' anticipations are already being realised in connection with the ore body on the Rake vein; the nip has been passed, and the vein is now 6 feet wide, yielding fine boulders of lead ore, worth 1 ton per fathom, and improving every foot. This rich lode, averaging from 8 to 10 tons of lead ore per fathom, has already been opened upon for a length of 20 fms., and, as stated above, the end is again rapidly improving, while (and to this fact too much importance cannot be attached) the ground is standing whole up to the horse level (a depth of 35 fms.) The 20 end east is many fathoms behind the 30 end, but, the manager writes he hopes "soon to make a good discovery in this direction." The prospects upon Lumb vein are reported to be good. The September produce amounts to 45 tons of lead ore, worth 450*l.*, at a cost of 350*l.* There are also 70 tons dressed and 40 tons weighed to smelters; this will be ready for sale next week. Machinery in good order.

SOUTH DARREN.—The reports from this mine continue to be exceedingly favourable. They have began to drive the 100 west and east from the winze, the ends being worth respectively 45*l.* and 38*l.* per fathom, with every indication of opening a rich piece of ore ground in this level. The communication with the shaft will soon be made, when there will be a very valuable section of ore ground laid open for further stopes, which will enable the returns to be increased. The lode in the 90 end is worth 50*l.* to 60*l.* per fathom, and the stopes in the high back of this level 38*l.* to 40*l.* No. 1 stope in the back, east of winze, 25*l.*; No. 2 stope west, 50*l.*; No. 1 stope, in the back of the 80 fm. level, 20*l.*; and No. 3 stope, 6*l.* per fathom. They have resumed the driving of the 80, and have commenced to cross-cut in the 70 end, at both of which points improvements are expected soon. They have sold this week 40 tons of rich silver-lead ore for the past month, which have realised 603*l.*, or 15*l.* 1*s.* 6*d.* per ton.

THE CLOGAU (WELSH GOLD).—The monthly report appears in another column. At the commencement of the month (September) gold continued to be obtained from No. 7, which is still in bismuth. A favourable change is expected shortly. The branch lode is producing visible gold; there are now opened out by this level 5 fms. in length on the shoot from above. The Britten pans worked 1258 lbs. of ore, which yielded bars of gold weighing 69 ozs. 12 dwts. 19 grs. For eight months a sufficient amount of gold has been obtained to meet the entire development and working cost of the mine.

WATERWORKS—CONTRACT No. 6.

WANTED,—TENDERS for about FIFTY TONS, more or less, of PIG LEAD, for jointing water mains.

Forms of Tender, with schedule for prices and specifications, will be forwarded in duplicate on payment of One Guinea, one-half of which will be returned on receipt of a *bona fide* Tender.

Sealed Tenders, endorsed with the words "Tenders for Pig Lead," to be addressed and forwarded, post paid, to the Undersigned by the morning postal delivery of Wednesday, October 30th, 1878. Tenders otherwise sent will not be received.

The Commissioners do not bind themselves to accept the lowest or any Tender.

T. T. MARKS, C.E.,
Engineer to the Commissioners.

Commissioner's Office, Llandudno, October 4th, 1878.

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Date.	Mines.	Tons.	Price per ton.	Purchasers.
Sept. 28	—Grogwinion	100	£ 9 15 0	Walker, Parker, and Co.
	—Tan-yr-Allt	6	8 1 0	Nevill, Druce, and Co.
Oct. 10	—Talargoch:—			
	Maesyrewddu	80	10 13 6	Adam Eyton.
	Coetia Llys	30	11 5 0	Walker. Parker, and Co.
	—East Pant Du	40	9 0 6	ditto
	—Rhyd Alyn	40	10 1 6	ditto
	—Coetia Mawr	5	9 7 6	ditto
11	—South Darren	40	15 1 6	Panther Lead Company

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Oct. 9	-Talargoch	55	£ 3 17 6	Swansea Vale Company.
—	ditto	165	3 14 0	Vivian and Sons.

COPPER ORES.
Sampled Sept. 25, and sold at Swansea, Oct. 8.

Mines.	Tons.	Produce.	Price.	Mines.	Tons.	Produce.	Price.
Spanish Ore	138	6	£4 8 6	Knockmahon	101	3½	£1 5 0
ditto	138	6	2 9 0	ditto	44	7½	4 5 0
ditto	169	6¾	2 15 6	Berehaven	61	8¾	4 18 0
Union	133	12¾	6 18 0	ditto	36	10⅜	6 0 0
ditto	133	12½	6 14 0	Copper Matt.	10	11	6 18 0
ditto	127	12¾	6 19 0				

TOTAL PRODUCE.

Spanish Ore	445	£1141	14 6	Berehaven	97	£ 514	18 0
Union Ore	393	2491	9 0	Copper Matt	10	69	0 0
Knockmahon	145	313	5 0				

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount
Copper Miners' Company	271	£ 1,252 7 0
P. Grenfell and Sons	271	1,588 15 6
Nevill, Druce, and Co.	10	69 0 0
Williams, Foster, and Co.	232½	910 6 0
Mason and Elkington	64½	445 11 0
Sweetland and Co.	101	126 5 0
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Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be *filed* on receipt; it then forms an accumulating useful work of reference.

Received,—The letter from "Bournonite" (Toronto) shall appear next week—"Chemist," on the London Gas Companies—"W. E. T."—"R. P." (Redruth)—"A. S." (Dudley)—"Shareholder" (Wheal Grenville)—"Constant Reader"—The letter of "Humanity," on Colliery Accidents, is declined—"H. G."—"Shareholder" (Eberhardt and Aurora)—"J.D.O."—Mr. Knapp's reply to "Engineer" shall appear next week.

Important Notice—Reduction of Postage on the "Mining Journal."—In consequence of the new Postal Convention, which came into operation on July 1, the postage of the *Mining Journal* to many countries will be reduced to one-fourth. Henceforth the subscription will be 1*l*. 10*s*. 4*d*. per annum (39 frs.), postage included, for the following countries. The amount will, if desired, be collected at the subscriber's residence at the end of each year. The subscription continues until countermanded:—Austria, France, Belgium, Denmark (including Iceland and the Faroe Islands), Egypt, Germany, Gibraltar, Greece, Heligoland, Italy, Luxemburg, Netherlands, Norway, Portugal (including Madeira and the Azores), Roumania, Russia, Servia, Sweden, Switzerland, United States, Malta' Turkey, Morocco, Tunis, and the Canary Islands. Spain 1*l*. 19*s*. (50 frs.)

American Subscribers.—In reply to several enquiries, it may be stated that subscribers in the United States can be supplied with the *Mining Journal* post free, at the price of $8 50c. gold per annum, payable in advance, by remitting to Mr. D. Van Nostrand, publisher, and importer of scientific books &c., Murray-street, New York; or, direct to our Office, 26 Fleet-street, E.C.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, OCTOBER 12, 1878.

THE VARIOUS SYSTEMS OF WORKING COAL.

SAFETY WITH ECONOMY.

The serious loss of life which has taken place at the Abercarne and several other collieries during the last nine or ten months owing to explosions, in our opinion, should lead to a searching enquiry into the systems of working at those mines. The object of such an investigation should be to see whether improvements could be introduced for giving increased safety to life and limb to the workmen employed in them in the underground operations. Amongst other things this would relate to the ventilation, so that any accumulations of gas could be constantly dispersed by means of a plentiful supply of pure air. It frequently happens that in a district where at one colliery working a certain bed of coal a system is in every way successful that at another where the same seam is being cut would be just the reverse. At the same time, we find that there are localities where the minerals being worked give off a great deal of gas. Yet there is comparative, if not entire, immunity from explosions of a serious nature, whilst at others where the coal does not give out near so much gas there are explosions resulting in a heavy loss of life. It is, therefore, apparent that the system of working, ventilation, or discipline must have something to do with these fearful catastrophes that of late have burst upon us with appalling suddenness, in consequence of the heavy loss of life which has resulted from them. Lancashire, South Wales, and Scotland have furnished of late the largest additions we have had to the heavy list of unfortunate workmen who lost their lives by explosions in our collieries. Yet there are other districts where the coal mines are far more fiery, which for a long time have been free from explosions. As an instance, we have it on the best authority that in the Bentham seam of the Wallsend Colliery, in the North of England, the mean annual quantity of gas evolved from a closed or barred-up district of 50 acres was 34½ millions of feet, equal to the solid contents of a coal bed 5 ft. thick, and 160 acres in extent. Yet last year in the North of England, where there was raised more than one-ninth of all the coal produced in the kingdom, only two persons were killed by the firing of gas. In Yorkshire, where the coal gives off more fire-damp than any other district we have, and where the fatalities from explosions have been the heaviest recorded, in 1877 only three deaths took place from explosions, whilst in the entire of the southern part of the same field, which includes Derbyshire, Notts, and Leicestershire, there was only one death as the result of an accumulation of gas, This healthy state of things was not a matter of chance, but the certain outcome of diligence, discipline, and the successful methods of working and ventilation carried out by those in charge of the collieries, and aided by the Inspectors of Mines. The miners in the districts we have alluded to have not been unmindful of their own safety, and, with perhaps an exception here and there, have done all they could to carry out the rules and regulations laid down for the guidance of all persons connected with coal mines. If so much, then, has been done in the worst districts we have so far as gas is concerned, surely those more favoured by having so much less gas should at least be equally as free from fatalities caused by explosions. But such we know has not been the case. The reason can only be inferred as owing to the system of working and ventilation, or the laxness of the discipline, or all combined. The enquiry, it is to be hoped, so far as Abercarne is concerned, will make known the actual cause.

The late serious explosions, it may be said, have led to comparisons being made for the purpose of showing that some 50 or 60 years ago there were less fatal accidents from explosions in mines than in late years as compared with the quantity of coal raised. If this is really the case it can be easily accounted for. It was the usual course many years ago before collieries were opened out to anything like the extent they are now to sweep all the excavations or goaves by a current of fresh air. Every old heading acted as a windway, to support which large pillars of coal were left, in some instances being 50 or 60 per cent. of the whole of the mineral. This large quantity of coal was, consequently, sacrificed, so as to allow of the principle of coursing the workings and goaves with air. Had the pillars been taken away then the gas would have found its way into the goaves or old works, and naked lights or a bad lamp would have caused an explosion. Indeed, if we mistake not, it was in removing some of these old pillars that the explosion took place at the Blantyre Colliery. At the time these pillars were left standing the number of men employed at the largest collieries was not probably more than one-fourth of those that now find work in a first-class mine. The introduction of the safety-lamp, however, led to a great change, so that by having the airways or roads constructed so as to ventilate the whole of the workings the pillars to which we have alluded as being left under the old mode of working were removed, and thus added greatly to the production. The removal of the pillars left large excavations that soon became reservoirs for gas, that at all times have to be carefully looked after, and no naked lights to go near them, for the goaves are always sources of danger.

The working of coal has, consequently, undergone great changes and there are now about three recognised systems that can be adopted either in their entirety or in a modified form. Safety and economy are the leading elements in each, as well as the production of large and marketable coal. In opening out a colliery at the present time, where there is plenty of capital, the best plan by many of our engineers is considered to drive out to the end of the boundary of the property, so that the coal can be worked towards the shaft. This is done by driving levels and endings, and working the coal back on the bord in banks, intermediate levels being driven as required. By this system the goaves where the gas generally lodges are left behind. The longwall mode is carried out in many districts, as it has under certain circumstances great advantages. It sends the air across the working faces of the coal, and by that means has not the distance to travel nor the resistance to meet with in doing its work that it has in the pillar and stall system. In some of the largest mines in South Yorkshire longwall is successfully carried out, more particularly in working the Thick coal. In some instances this is carried out by packed gate roads through the goaf with banks from 20 to 30 yards wide, and cutting at 3 or 4 yards at each end, or by driving endings in advance of the banks, and driving bords at the same intervals to the bank faces. This obviates the necessity of keeping opened packed roads through the goaf. A colliery laid out on this principle has many advantages, for it can be readily divided into panels, and so separately ventilated—so that in case or an explosion the effects would be confined to one district or panel only. By longwall the produce of an acre 1 ft. thick has averaged 1150 tons, 100 tons of which was slack. Pillar and stall is a well-known mode of getting coal, and is carried out with certain modifications in different districts. In some instances banks with pillars are formed into a panel, then a pair of bords with a large pillar, and then another panel of banks, and so on. The banks are carried perhaps 100 yards, and then another pair of levels are driven in advance. The ventilation by this system is separate for each panel. Bords and leading banks is a very old mode of getting coal. Levels are driven from the pit bottom, and bord-gates 80 to 100 yards apart, and when they have advanced some distance a bank of 20 yards or so wide is started between the bord-gates, leaving 15 or 20 yards of pillar next the bords. A following up bank is afterwards taken off each side from the opening-out level, of 3 or 4 yards in width, and this is repeated until all the pillar is worked off. Now, there should be no difficulty in adapting a system such as we have noticed for any seam of coal, and so arranging it and the ventilation that explosions should be almost impossible; but these cannot be laid down or carried out by any fixed standard.

The importance of a good mode of ventilation cannot be overrated. It should be so arranged that unless from a sudden outburst the gas could not be allowed to accumulate to any appreciable extent. Where it does there is a neglect somewhere, for the air going through a mine should be sufficient to render an explosion all but impossible. This is the opinion of our best known mining engineers, and Mr. W. H. Peacock, of Barnsley, in writing on the subject, says—"There is no excuse for any accident arising from deficiency of air, because it is sufficiently established that a quantity sufficent to meet all ordinary cases may be easily caused to circulate through the workings of a mine, the only requisite being a powerful furnace or some other artificial means of producing ventilation." The furnace, which is the prevailing mode of ventilation, is fast giving way to the fan, and in the course of a not very long time the former will be but comparatively little known, for new collieries have the best mechanical appliances in the shape of fans, and many of the largest and oldest are also adopting them. The furnace itself at times is a source of danger, for the return air passing over it often contains an explosive mixture, whilst a good deal of pure air is required to feed it. With the furnace, also, it is necessary that the man in charge of it should be most reliable, for his duties are most onerous, and his responsibility great. The late Mr. H. Mackworth, one of Her Majesty's Inspectors of Mines, stated that he had met with instances where "the ventilation had fallen from one-seventh to one-fourth in amount from the neglect of the man in charge of the furnace in mines where the ventilation was barely sufficient to dilute the explosive gases." "How many explosions," he asks, "apparently difficult to account for, may have arisen from this cause?" The fan, on the contrary, acts independently, requiring no constant attention, and produces a much larger volume of air than the best of furnaces, and is not liable to get disarranged. Although brought prominently forward during the last few years the fan has been in use at some places for a long period. Herburger's fan was applied more than 40 years ago to ventilation, and that of Letoret has long been in use in Belgium. Mott's Archimedean screw was also applied to the ventilation of mines, and in 1840 was awarded a gold medal by the Belgian Academy of Sciences. Mechanical ventilation may, therefore, be considered as the safest and most reliable, besides being able to produce a vast amount of air, some of them now in use giving as much as 250,000 cubic feet per minute.

The experience of our most eminent mining engineers, whilst going so far as to admit that it is impossible to overcome at all times great outbursts of gas that come on suddenly, is that with a good system of working, proper ventilation, safety-lamps, and strict discipline there should be no explosions from accumulations of gas in the working places. Where these primary objects are not attended to and efficiently carried out then explosions such as we have had to notice of late may be expected to take place from time to time. We have, however, endeavoured to show how such catastrophes can be averted, and the responsibility which rests upon those who have the whole management of collieries.

IRONMAKING IN PENNSYLVANIA.

In 1873 the cost of making a ton of pig-iron in Pennsylvania was computed at $28·97 per ton, while in 1850 the corresponding cost was only $14·28 per ton. The two totals may be analysed thus:—

	1850—Cost per ton.	1873—Cost per ton.
Ore	$5·75	$13·20
Coal	3·70	7·15
Labour	2·22	3·79
Limestone	0·93	1·97
Interest, &c.	1·68	2·76
Total	$14·28	$28·97

The feverish activity in railroad building which gradually developed itself in the United States in 1871, 1872, and 1873 caused a remarkable inflation in prices in the last mentioned year; but since 1873 the Americans have learnt some very stern, although probably salutary, lessons, and values have slipped back to a much more reasonable level. The cost of making a ton of Pennsylvanian iron was computed last year to have been at the rate of $18·26 per ton, this total being made up thus:—Ore, $7·69; coal, $4·93; labour, $2·02; limestone, $0·81; and interest, &c., $2·81. The cost of iron making in Pennsylvania would thus appear to be gradually receding to the level at which it stood in 1850. This must be pronounced an important and, indeed, an indispensable result, having regard to the great fall which has taken place in selling prices during the last five years. It is curious to note how inflexibly economic laws work in the New World as well as on this side of the Atlantic. There have been strikes and labour convulsions in Pennsylvania as well as in Great Britain; in fact, the labour riots which afflicted Pennsylvania in July, 1877, were almost, if not quite, unprecedented for gravity and ferocity. Yet while the item "labour" figured in the cost of making a ton of iron in Pennsylvania in 1873 at $3·79, the corresponding cost had declined in 1877 to $2·02. All the declamation and all the violence in the world cannot, indeed, sustain the price of labour at a level higher than that justified by the actual facts of the case. It is, perhaps, right to remark that of the $2·81 per ton charged in 1877 for interest, &c, only $1·26 per ton represented interest properly so called on capital invested, $1·35 per ton relating to renewals, repairs, taxes, insurance, and sundries.

Throughout the annals of Pennsylvanian ironmaking the heaviest items of expenditure have been ore and coal. In 1873 these two items alone cost $20·45 per ton, while in 1877 the corresponding cost was $12·62 per ton. The great rise observable in the price of ore in 1873 does not appear to have been due so much to any increase in the actual cost of production as to the rapid development of iron works in Pennsylvania and one or two other States of the American Union in 1871, 1872, and 1873. This development occasioned considerable competition for ore, and prices were accordingly forced up rather sharply. Similarly, the decline in the cost of ore which has taken place in Pennsylvania since 1873 is due more to the large number of ironworks put out of blast than to any actual reduction effected in the cost of raising ore. Ironmaking companies owning ironstone mines, coal mines, and limestone quarries are, of course, greatly benefited by the possession of such property, as they are relieved from the trying consequences of excessive market fluctuations. For the rest, it may be fairly doubted whether the Protectionist system which still finds favour with the Americans has not occasioned some of the severe vicissitudes from which their iron trade has suffered during the last ten or twelve years. Protection to American ironmaking enabled American ironmasters to maintain themselves against foreign competition, but at the same time an excessive amount of capital was attracted into the American iron manufacture, which since 1873 has been altogether overdone, although matters appear now to be gradually righting themselves, more especially as the greater cheapness of American iron will necessarily involve an increased demand for it.

ELECTRIC ILLUMINATION—THE JABLOCHKOFF LIGHT.

Among the many attractions which have received the attention of visitors to Paris during the present Exhibition probably few have proved greater than the very brilliant Jablochkoff light used for the illumination of the Avenue de l'Opera, the Magazins du Louvre, Western Railway Station, and other places, and on Wednesday evening an opportunity was afforded to the inhabitants of London to judge of the merits of the light, Messrs. Wells and Co., of the Commercial Iron and Marble Works, Shoreditch, having completed their arrangements for exhibiting it for the first time in this country in the presence of a large number of invited friends. The showrooms of the firm are especially adapted for such an exhibition, consisting, as they do, of an enormous ground space, with galleries above, giving a total height of 80 or 100 ft., and as they were well furnished with the ordinary trade stock, the character of the light could be very clearly seen upon inspection of the numerous verde antique, lapis lazuli, rouge royal, malachite, and other specimens made up in the form of chimneypieces and otherwise, and of the delicately tinted statuary used to show the effect of ornamentation. The mode of mounting the lamps was extremely tasteful, and although the effect was somewhat marred by shutting off the currents which supplied the lamps in order to show special experiments to the visitors, there could be no doubt as to the practicability of this system of illumination. The lamps were mounted two upon continued brackets in the centre of the building, two in one of the upper galleries, and two in the street, and so far as the interior of the building was concerned there was an absolute absence of shadow, owing to the manner in which the light was distributed.

Both the Gramme machine and the Jablochkoff candles having been fully described in the *Mining Journal*, it will be unnecessary to repeat all the details; but it may be mentioned that on this occasion the Gramme machines were driven with about 45 lbs. of steam, and by an engine of 15-horse power, but the actual power exerted was from 5 to 6-horse. One generator made about 1000 revolutions per minute and the other about 1200 revolutions. The engine supplying the motive power was that ordinarily used on the premises, and with the two Gramme machines mentioned it is found that in regular working they are ample for the six lamps, and absorb about 1-horse power per lamp. In the ordinary electric light, as used for lighthouses, &c, a single machine is used, which gives a direct current—that is invariably from the positive to the negative pole—and the carbon rods are placed perpendicularly one above the other. The upper, or positive pole, is consumed at double the rate of the lower or negative pole, and the distance of the points is regulated by clockwork and a magnet. But this operation is always uncertain. The system in operation at Messrs. Wells and Co.'s works—the Jablochkoff system—is furnished by the owners of the patent, the Société Générale d'Electricité, of Paris. The carbon rods are placed side by side, separated by a slip of ordinary plaster of Paris, over which the electric arc passes. In order to ensure equal combustion of the rods an alternative current is adopted, for which purpose two machines are employed. In other words, currents pass from rod to rod in opposite directions at the rate of about 8000 per minute, a total of double that number, and the carbons are equally consumed. Each lamp is provided with holders for four candles, but only one is used at one time. Each candle will last one and a half hour. When it is nearly consumed a switch moved by hand, or automatically by an electro-magnet, turns the current to another candle, but so instantaneous is the change that no interval or cessation of light can be observed.

The light is placed within the opaline globes for the purpose of diffusion; it can be used without globes or in transparent glass, but the intensity of the point of light is painful to the eye, and casts such deep shadows as to be inconvenient. It will be observed that the light radiating from the entire surface of the globe is soft and agreeable, and that the shadows are hardly perceivable; at the same time, the use of this opaque glass cuts off from 30 to 50 per cent. of the light. The colour of the light is pure white, capable of exhibiting the most delicate colours. Each lamp is considered to be equal to about 100 gas lights, but in reality it is much more, because no amount of yellow gas can give a white light. With regard to cost, which after all is the most important question in matters of this kind, it appears that the advantages of the electric lamp are considerable, though the first cost of the apparatus will always prevent its adoption for small buildings, to which it is in some respects unsuited. In France the expense of the apparatus, including lamp, magneto-electric machine, wires, &c., is about 96*l*., but once erected, the cost of maintenance, including the combustible carbon points and all incidentals, does not exceed on the average 6d. per hour. Such, at least, is the experience in the Gramme Company's workshops, where these lamps have been in constant use for the last four years. The principal workshop, which is 16 feet in height, and 1468 square feet in superficial area, was formerly lit by 24 gas burners, but a single electric lamp now suffices to give a vastly better light, and at a much smaller cost. At the Du Commun works at Mulhouse, the foundry, which has an area of nearly 16,000 square feet, was formerly lit in a very imperfect manner by 250 gas burners. Perfect illumination is now supplied by four electric lamps attached to cross beams, at a height of 16 ft. from the floor, and worked by a single Gramme machine. The first cost of the apparatus here was 400*l*., or about the same as that of the 250 gas burners which it replaced, and the light afforded by the four lamps is fully equal to that of 400 burners. It is found that as a general rule, one lamp will illuminate sufficiently an area of 5120 square feet in a machine shop, half that area in a printing or weaving establishment, and four times that area on a quay, ship-yard, or other locality where fine work is not carried on. At present the Jablochkoff candles cost about 8d. each, which alone would represent 4d. per lamp per hour, but as they are of very simple construction, there is no doubt that they will ultimately be produced at half that price, when the light will be much more widely applicable.

Gas and Electricity.—Shares in gas companies have been subject to a considerable depression during the week, the result of a panic following the announcement that Mr. Edison, the inventor of the phonograph, had discovered the means of multiplying indefinitely the number of lights from one electric machine. From this sudden drop they will, in some measure at least, recover when the excitement caused by Mr. Edison's telegram to Prof. Barrett, and the description given by the New York Sun of the discovery, has calmed down. But there is an end of the confident assurances with which the chairman of the gas companies endeavoured to buoy up the hopes of their shareholders last week. So long as the relative cost of gas to electricity was something like 1 to 10, there was little ground to apprehend such a revolution as would materially injure the commercial value of gas. The fact, however, that the excessive cost of the electric light was due entirely to the inability to divide it—that is, to reduce each separate light to an illuminating power of less than 4000 candles—was not one to excite entire confidence in the future on the part of shareholders, and when the announcement was made on Tuesday that Mr. Edison had discovered the means of producing 1000 or 10,000 lights from one machine, the anxiety which the discussion of the previous week had created yielded to a panic. Mr. Edison is too well known in the scientific world to leave us in any doubt that he has made a most important discovery. He would differ from most inventors and discoverers if he were not very sanguine, and we shall not be surprised to learn that the results of his discovery do not quite realise the expectations which he has based upon it. He believes that he has solved the problem of obtaining power and heat—thus displacing steam for most purposes, on account of its greatly superior cheapness—as well as light, from electricity, and that the same machine will at the same time yield the threefold results at a cost which will make them commercially valuable; but if he can give us a pure non-explosive light at a cost

no greater than that of good gas, we shall not be disposed to begrudge him the profits which cannot fail to flow abundantly into his pockets. At present he is too busy patenting his discovery to make it known; but in a few weeks we are to know all about it.

COMPETITION IN THE IRISH COAL TRADE.—Lately a very large quantity of coal has been shipped from South Wales to Irish ports, the tonnage showing a considerably larger quantity than that shipped from the West Cumberland district.

PROFITS AND WAGES IN THE COAL TRADE OF FRANCE.—Some interesting statistics have just been prepared by M. Duporcq, mining engineer, who shows that in spite of the crisis which so strongly prevailed in 1871 the output of coal in the Pas de Calais in that year was 3·33 per cent. more than in 1876, and that this increase of production has more than progressed since 1872. The improvement, however, was merely apparent, owing to the considerable fall in prices. In the department mentioned, with the stock on hand at the commencement of the year, there was a total of 3,586,267 tons. The colliery company and their servants consumed 313,741 tons, and the sales amounted to 3,187,457 tons. Of this quantity 699,800 tons were used in the Pas de Calais. 1,088,129 tons in the Nord, and 1,399,528 went to other markets. At the end of the year the stocks in hand represented 85,069 tons, as against 151,226 in the corresponding period of the previous year, indicating that the owners restricted the production as far as convenient. The number of colliers employed was 18,293, and day labourers 4866. The wages earned by the former amounted to an average of 42*l.* 3s. 4d. each per annum, or 2s. 10½d. per diem. The labourers received no more than 17*l.* 5s., or 1s. 2d. per day. Each workman produced 188 tons. The wages paid corresponded to 5s. 2½d. per ton, and as the cost price is set down at 13fr. 28c., and the selling price at 14fr. 28c., the average profit to the coalowners was 30c., or 3d. per ton.

COKE BURNING IN CUMBERLAND.—The Maryport Iron Company have come into possession of the Ellenbrough Colliery, and it is stated they intend erecting about 200 ovens for coke-burning purposes. The coke-burning industry in Cumberland is gradually developing itself, even in these times of depressed trade. The arrivals of Spanish ores at Cumberland ports show a falling of as compared with a few weeks since.

THE TIN-PLATE TRADE.—A large and influential meeting of the tin-plate trade was held, on Wednesday, at the Bell Hotel, Gloucester. A proposal for the reorganisation of the trade was discussed at some length, and ultimately agreed to, and Mr. G. B. Strick was appointed chairman, and a council appointed representing Staffordshire, Monmouthshire, Glamorganshire, and Carmarthenshire. A general opinion was expressed that the tin-plate trade was never in a worse condition than at the present time. Over-production was spoken of as one of the main causes, and the combination for the reduction of make was particularly urged upon the trade. Incidentally it was mentioned that, with one exception, the makers in the Swansea district had joined the combination. One of the speakers remarked that although the price of material had fallen considerably during the past three years the makers had fully discounted the reduction, and were making at a loss. Several trade matters were discussed. The relative price of wasters to prime plates, and of C D to I C were referred to the council, as also was the question of the terms of payment. The question of price was fully discussed, and the meeting pledged itself to a certain minimum price. It was reported that nothing further had been done in reference to the suggested revision of the French tariff. A special vote of thanks was awarded to Mr. Spence for his efforts in reorganising the trade.

THE SCHEMNITZ MINES.—The deep adit level for the drainage of the Schemnitz Mines in Hungary, commenced in the reign of the Emperor Joseph II. in 1782, was completed on the 5th of last month. It is about 10½ miles long, mostly in very hard volcanic rock, and intersects the mines at depths from 800 ft. to 1500 ft. below the surface. The point where the junction of the last sections was effected is about 2200 ft. deep, being under a mountain mass. This is the third great adit level completed within two years, the others being the Sutro Tunnel in Nevada for the drainage of the Comstock Mines, and that of Rothschönberg, which leads the waters of the Freiberg Mines to the Elbe.

REPORT FROM CORNWALL.

Oct. 10.—There were those who feared that at the last meeting of the smelters, what with the gloomy aspect of affairs abroad, and what with the complications at home, especially those arising from the failure of the City of Glasgow Bank, there would be a further reduction in the standard. Happily this was not so, and we do not think we are far wrong in interpreting it as indicating that the smelters are convinced, with well nigh everybody else in Cornwall, that the worst of the contest with colonial tin is over. Australia and Tasmania are in a very sad plight; they are, indeed, worse off than we are, because with them tin mining is rather a casual than a settled industry, and has nothing to fall back upon. It is not too much to say that if mining here had not then interwoven as it were into the very life of the country, if it had not been almost a necessary condition of its existence, it would have died out long since under the terrible pressure to which it had been subjected. That it has survived is due alike to the pluck of miners and adventurers, and the influence of habits and arts extending back over a period to be reckoned by thousands of years. Let us hope now that the reward is not far distant. We have been waiting for it until hope is well nigh dead with most people, and in some quarters has departed altogether. Australia and Tasmania "forced the pace" at starting, but now most people can see, what some, indeed, have always contended, that Cornwall is the better "stayer." The severity of the pressure may be illustrated in several ways. Thus at the last setting at Dolcoath Capt. Josiah Thomas had to reduce the tributers' tin standard from 38*l.* to 36*l.*, which, of course, means a reduction of over 5 per cent. in the wages. So, again, at an auction held for the sale of West Godolphin and Penhalls shares, none were sold; and the dulness, too, is not confined to mining. An auction was held for the sale of the Calstock Fire-Brick and Clay Works, but although there was a large attendance, there was not single bid. This shows how general and how wide-spread is the depression with which the county has to contend.

People often write very absurdly about what they do not understand. The Spectator the other day in an article on the "Cycle of Depression" unfortunately for itself took tin mining as one of its illustrations. In the course of the article it said—

"Many men we begin to be convinced do hold this—do think that the world being so big it can never be sufficiently supplied with any article, and that the only cause of demand not rising as prices fall is the diminished means of buyers. The public will they suppose if only it has money buy any amount of anything that is very cheap. Take, as an almost comically complete illustration of this feeling, the condition of the tin trade. Tin, as everybody knows, has been in a bad way for some time. The metal is being worked in the Eastern Archipelago, Singapore, Burmah, Siam, and Australia, till in 1877 the foreign supply exceeded that from the mines of Cornwall and Devon. The English mine owners, however, kept on digging away and producing precisely the same quantities, till the markets could absorb no more, and the price of common black tin sank from 153*l.* 15s. per ton to 73*l.* 3s. 7d., a fall of much more than a clear half. At this price tin does not pay, and scores of mines have been closed, but the owners of the remainder are only taking advantage of their opportunity to produce as much as all the mines produced before, although hopeless unless prices rise of any sufficient profit. They go on, in fact, as if they thought black tin was the end of mining, instead of a cash balance."

Now, the writer of this article is evidently in ignorance of the fact that what has taken place in Cornwall is not the mere keeping up of the produce of black tin, but the reduction of the cost of production, and that the competition is not whether Cornwall or its rivals shall produce the most black tin, but which shall produce it at the cheapest rate. That is the contest which by the very course of action which the Spectator condemns is now being decided in our favour. To have adopted any other course would have been absurd and suicidal. Suppose Cornwall had given up the competition—that it had ceased to "keep on digging away," what would the result have been? It would only have cut its own throat, and would have handed over its business without a struggle to its foreign foes. The increased individual output has been rather an accident than a necessary condition of the contest, arising out of the endeavour to make both ends meet, which only the cheapening of production rendered possible. Now we are seeing our way to what the Spectator recommends, but evidently did not see the way to attain—a lessened production, based upon conditions which place the matter in our own hands.

One of Mr. A. S. Cameron's patent air or steam pressure engines (Tangye makers) for pumping water out of winzes or into boilers, or for drawing stuff, is in use at Dolcoath, and given great satisfaction. One was tried in a winze below the 300 fm. level with compressed air, as used in the boring-machine, and in four hours it pumped 300 gallons out of a 7-fathom winze—equivalent to three cores incessant toil at the hook handle—an unpleasant operation which costs the mine about 20*l.* per month. The miners were delighted with the result, and the engineman at surface noticed but a very slight difference on the pressure gauge of the powerful engine erected by Mr. M. Loam, M.E., which supplied the extra motive-power required. Mr. T. Capel, working engineer of the mine, speaks highly of its utility for pumping water into boilers, one being attached to the new pumping-engine and boring-engine. A large boiler was filled in an hour and five minutes, and scarcely affected a pressure of 40 lbs. to the square inch. With this engine the engineman can keep plenty of feed in his boilers and his steam at an even pressure—all tending to economy of working. One of the engines for drawing will most likely at no distant date be introduced into the mine. The new skip-road at Dolcoath has been completed in less time than was ever known before in the county.

The enquiry into the late fatal accident at Carn Brea has clearly shown the need of exercising great caution in searching for dynamite left after an explosion, especially when holes are driven and fired in groups. Major Majendie, who was specially sent down, agreed with a theory advanced by Mr. Webb, that the exploding of one place carried away the other, in certain cases, but pointed out that there were other ways of accounting for the occurrence. One was the imperfect detonation of the detonator; but if they had one or many reasons it came to this, that they could not conduct these operations until they had very careful and an almost elaborate system of searching before they bored new holes. One thing is perfectly clear, that if searching was done it was very imperfectly done. If the stuff was left in the hole the cause of the explosion was easily enough explained. It was left in a wet hole, and perhaps exudation had taken place to a certain extent, and the working of the drill knocking hard stuff into the hole caused it to explode. He would report to the Secretary of State that the accident arose in that way, and that there was dynamite left in the hole—unfortunately not discovered—and that the system of searching was not sufficient. Dr. Foster was glad to say that by a different method he had arrived at the same conclusion as Major Majendie as to the cause of the accident. He had had to report several similar accidents in the county brought about in a similar way. He believed that dynamite had been left in the hole, and that the explosion was caused by the drill. The theory of dynamite lying about in the rubbish must be given up. The jury returned a verdict of "Accidental Death," with a recommendation that some method should be adopted in mines to insure perfect search after blasting before further boring. The more powerful the explosives used the greater should be the care exercised.

NOTES FROM THE CLEVELAND DISTRICT.

Oct. 10.—Since the date of my last letter the tenour of the Cleveland Iron Trade has been very even until a week ago, when the stoppage of the City of Glasgow Bank was announced. At first the effect of this announcement upon the Cleveland market threatened to be very serious. It was known that two or three large firms, at any rate, were closely associated with the Scotch trade, and fears were entertained that they might be involved in the general ruin. The most careful enquiries have, however, served to convince me that Cleveland firms are free from any participation in that great commercial disaster. The effect, however, is being felt through the fall of the Scotch market, and the fairly steady prices of Cleveland iron which have lately prevailed are altogether upset. At the meeting of the iron market, on Tuesday, the prices quoted by some merchants were truly of the "fancy" type. No. 3 iron was offered at 35s. by some for delivery three months hence, though it could not then be bought under 38s. 6d. per ton. Although the great effort of the makers connected with the Cleveland Ironmasters' Association has for some months past been to get rid of their stocks, they will store their iron rather than meet the demands of merchants. The wonder has long been expressed in other districts how Cleveland iron could pay at the prices at which it is sold. It is certain that a loss would be made if offered at figures greatly under the present quotations. Wages in every department are now as low as they can reasonably be brought, and as every economy is at present practised it is difficult to see how the trade can bear a further reduction in prices. The fearful result of the wild inflation which prevailed in 1873 is now being felt on every hand, and matters have reached the point beyond which it would appear there can be no accommodation to circumstances, although circumstances remain as uncompromising as ever. It will, however, be better to store iron than to sell at losing rates, although the question then arises—Who can afford to store? I expect to hear of two or three furnaces being put out of blast shortly, and that will tend somewhat to ease the market. The statistics of the Cleveland Ironmasters' Association for the month of September are scarcely so encouraging as was expected. While not showing an increase of stocks, they do not practically show a decrease. It was hoped and believed from the way in which iron was being sold at the early part of the month that stocks would be considerably decreased.

The following are the figures, the make of iron being the product of 95 furnaces:—

MAKE OF CLEVELAND PIG IRON.

	Port of Middlesborough.	Total of District.
Month ending 31st August, 1878 ... ..Tons	110,976	138,318
Month ending 30th Sept., 1878	108,202	134,479
Decrease upon August, 1878		3,839

MAKE OF OTHER KINDS OF IRON
(Including Hematite and Spiegeleisen).

Month ending 31st August, 1878		30,174
Month ending 30th Sept., 1878		31,216
Increase upon August, 1878...		1,012
Total make, August, 1878		168,492
Total make, September, 1878		165,695
Decrease upon August, 1878		2,797

SHIPMENTS FOREIGN OF PIG IRON FROM THE PORT OF MIDDLESBOROUGH.

Month ending 31st August, 1878	33,809
Month ending 30th September, 1878	34,034
Corresponding month last year	33,905
Increase upon Sept., 1877	129

COASTWISE OF PIG IRON FROM PORT OF MIDDLESBOROUGH.

Month ending 31st August, 1878	39,466
Month ending 30th September, 1878	33,302
Corresponding month last year	42,542
Decrease upon Sept., 1877	9,640

MAKERS' STOCKS OF CLEVELAND IRON.

	Port of Middlesborough.	Total of District.
31st August, 1878 ... .Tons	144,999	175,202
30th September, 1878	141,523	169,986
Decrease upon August, 1878		6,216

STOCKS IN WARRANT STORES.

Public stores, 31st August, 1878	77,257
,, ,, 30th September, 1878	82,557*
Makers' stores, 31st August, 1878...	40,134
,, ,, 30th September, 1878	38,461

ABSTRACT.

Decrease in make of Cleveland iron upon August, 1878	3,839
Decrease in makers' stocks upon August, 1878	6,216
Increase in stock in public stores upon August, 1878	5,300
Decrease in stock in makers' stores upon August, 1878... ...	1,673

* In N.E.R. Co.'s stores, 15,417 tons; in Messrs. Connal and Co.'s stores, 68,140 tons—82,557 tons.

From these figures it will be seen that practically stocks remain as before. The shipments do not compare favourably either in the last month or with the corresponding month of 1877. The shipping season is coming to a close, and a falling off, as compared with August, might have been expected, and not so as compared with September of last year. From the quarterly statement of Mr. Waterhouse, the auditor appointed by the Board of Arbitration for the North of England Manufactured Iron Trade, it appears that there has been a slight falling off in the quantities of manufactured iron as compared with the previous quarter. During the past three months the weights of rails invoiced were 5031 tons 4 cwts. 2 qrs. 18 lbs.; plates, 57,627 tons 14 cwts. 0 qr. 26 lbs.; bars, 17,755 tons 7 cwts. 3 qrs. 14 lbs.; and angles, 22,636 tons 18 cwts. 0 qr. 19 lbs.; or a total weight of 103,051 tons 4 cwts. 3 qrs. 21 lbs., as compared with 114,897 tons 9 cwts. 2 qrs. in the previous quarter. This is, however, a very small decrease, and as a matter of fact the quantities were larger than in the corresponding quarter of last year. The chief point worthy of note is the decrease in the average net selling price per ton. For the quarter just ended the average price was 6*l.* 0s. 5d., while in the corresponding quarter of 1877 it was 6*l.* 15s. The greatest falling off has been in the price of bars and angles. In August, 1877, the former were 6*l.* 14s. 8d., and the latter 6*l.* 7s. 11d. per ton, while in Aug., 1878, bars were 6*l.* 1s. 4d. and angles 5*l.* 10s. 8d. Strange to say the decadence in the price of iron rails has not been so marked. The manufacture is, however, steadily decreasing, but at the same time the demand for plates and bars has increased. Steel casting are to be made in Cleveland; on a small scale it is true, but the gradual introduction of the steel trade is of very great importance. But for the auxiliary trades which have within the last four or five years found their way into Cleveland, Middlesborough and the adjacent district could not have continued in the decent degree of prosperity which exists, notwithstanding all the sad forebodings which are expressed. During the month several fine vessels have been launched from the various iron shipbuilding yards on the Tees, and consequently work is somewhat scarce at present. I observe from the report of the Chamber of Commerce that the exports of coal and coke from the port of Middlesborough during the month of September were as follows:—Coastwise: Coal, 4318 tons; coke, 100 tons.—Foreign: Coal, 1702 tons; coke, 3520 tons; which figures compare, on the whole, very favourably with last year.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Oct. 10.—This week all interest in connection with the iron and coal trades centres in the Quarterly Meetings which were held in Wolverhampton, on Wednesday, and in Birmingham to-day. At each meeting there was a fair gathering. The orders that were booked were not large in either raw or finished iron. As to finished, the qualities which sold most freely were those produced by the marked iron houses. Stocks of pigs were reported to be heavy, and the evidences pointed to a decrease in the output of the district if trade does not revive. The threatened war in India tended to unsettle the market, and was complained of as likely to check business. The Glasgow Bank failure, and the commercial suspensions which have followed, also had a depressing effect.

At the Wolverhampton meeting the leading Shropshire and Staffordshire pigmakers declared prices unchanged upon the official basis of 5*l.* for all-mine cold-blast and 4*l.* for hot-blast sorts. It was freely admitted, however, that 5s. below these quotations was the actual selling price, and very good Staffordshire brands were easy at 3*l.* 12s. 6d. Medium and common pigmakers quoted "as before," as also did the hematite firms. "Marked" finished iron was based upon 7*l.* 10s. for bars, with 8*l.* 2s. 6d. for Round Oak bars. Makers of second and third class finished iron declared themselves unable to meet customers' demands for lower terms. Coal was unchanged in price, and very dull.

To-day, at the Birmingham Quarterly Meeting, it was announced that Mr. Chamberlain's wages award will not be made until Saturday or Monday. It is thought the reduction in puddlers' wages will only be about 6d. per ton, which will be too little to affect prices. Second and third class finished ironworks refused lower terms, pigs were declared unaltered, and marked iron remains at 7*l.* 10s. Business was dreadfully quiet, and although there was no declared reduction all prices were easier. Furnace coal remains at 9s. per ton. Some interesting objects were on view in the Hall, including fine specimens of red hematite ore from a new mine in Gloucestershire, and a sample of boiler-plates made from Swedish iron, exhibited by Messrs. Ketley, Glenday, and Co., Exchange Chambers, New-street. The ore, which attracted attention by its excellence and cheapness, has been analysed by Mr. Jones, the Wolverhampton borough analyst, who reports that the only practical impurity it contains is silica, and this not in excess. It shows but a mere trace of phosphorus and no sulphur, and contains 57·53 of metallic iron. It is, in fact, nearly equal to the best Cumberland iron, and costs 6s. per ton less delivered in Staffordshire. Some thousands of tons have already been disposed of to smelters in this district. The boiler-plates made of Swedish charcoal iron by the Bessemer or Martin Siemens process combine the toughness of iron with the hardness of steel, and are said to stand punching, bending, and flanging better even than Low-moor iron, whilst costing 4*l.* per ton less. Large quantities of these plates are now going to Canada. The American "standard" stretched leather-belting, exhibited by the same firm, has been noticed on a former occasion. Messrs. John Wright and Co., of Essex Works, Broad-street, Birmingham, exhibited specimens of their "patent paragon" screw stocks for gas-fitters and engineers. These stocks contain dies to cut four sizes of the Whitworth standard thread and adjustable tap wrench.

On Monday the Iron Trade Wages Board met in Birmingham, under the presidency of Mr. Joseph Chamberlain, M.P. The masters asked that a drop might be awarded of 6d. per ton in puddlers' wages, which is equivalent to a drop of about 5 per cent. in millmen's wages. The present rate for puddlers—8s. per ton—was fixed in January this year, when wages were dropped 7½ per cent. The masters urged the bad condition of trade as the reason for their application. Trade had, they said, never been worse than now. The men's representatives opposed the drop. They pointed out that during the past five years there had been reductions in their wages amounting to 52½ per cent., and urged that even their present position was worse than when wages were last at 7s. 6d. per ton—in 1868 9, consequent chiefly upon the decreased purchasing power of money. The Chairman said that he would give his decision at the close of the week. From the tenour of his remarks a reduction is in every way likely.

Messrs. Dowdeswell and Hawksley, two of the arbitrators under the South Staffordshire Mines Drainage Acts, held a meeting in Wolverhampton, on Tuesday, to hear appeals against a proposed mines drainage award for Old Hill. The rate proposed was 3d. on fire-clay and limestone and 6d. on ironstone, coal slack, and other minerals. The appellants were not numerous, and the cases were of little interest. In some instances total exemption and in other instances graduation was allowed.

At the Bilston Police Court, on Tuesday, David Bickley, manager of the Spring Bank Colliery, Willenhall, was charged, at the instance of Mr. J. P. Baker, with a breach of colliery rules. The offence was that the defendant had neglected to have the roof in a certain portion of the pit properly timbered, and as a result there was, on May 29, a fall of roof, which killed a miner. Mr. W. Walker, solicitor, of Wolverhampton, conducted the prosecution. Bickley was undefended. Mr. Scott, Assistant Inspector, visited the pit shortly after the accident, and found that the roof had not been timbered. In his opinion, if the timber had been there the roof would not have fallen in. The defendant pleaded that he was unaware that the props were so rotten. The magistrates pointed out that according to the Act of Parliament he was responsible for this part of the maintenance of the pit, and he had neglected to make himself acquainted with the true position of affairs. A fine of 5*l.* and costs was imposed.

Mr. Bernard P. Walker, of the Eagle Ironfoundry, Birmingham, has this week filed his petition for liquidation, with liabilities estimated at 18,000*l.* The assets are not yet ascertained, but are stated to be equal to the liabilities. Mr. Jas. H. Balmain, of Moseley-road, Birmingham, manager of the Cannock and Wimblebury Colliery Company, has by the Birmingham magistrates been fully committed

for trial at the assizes, charged with embezzling heavy sums of money belonging to his late employers, with forgery, and other offences. The Bilston magistrates, on Tuesday, fined David Bickley, manager of the Spring Bank Colliery, Willenhall, 5*l.*, for a breach of the colliery rules in not having "spragged" the roof of a holeing, and through this neglect a fall of roof had occasioned the death of a workman. The local Government Inspector of Mines prosecuted.

In the North Staffordshire iron trade new business is largely suspended this week pending the result of the quarterly meetings in the south of the county.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Oct. 10.—At several of the lead mines there has been an increased output of ore, so that the yield of 1878 promises to contrast favourably with previous years. Still there are comparatively few mines where the production is at all large, for it is only by having plenty of machinery and appliances that lead mining can be made at all profitable; but many persons from time to time embark in the trade without capital worth mentioning, so that after a short trial they have to give up. Hence it is that in the yearly returns we have a large number of mines given that have only yielded a few tons of ore. From what some of the large concerns are doing it is evident that the stores of lead in the county are far away from being exhausted, and that capital judiciously invested will even with the present price of lead yield fair returns. There is still but a moderate production of ironstone worked in connection with the coal measures, so that large quantities continue to be imported from Northamptonshire, where some of our ironmasters are working the ore on their own account. Derbyshire pig is still in tolerably fair request, considering the general state of the trade, but the prices have not improved. Of late there has been a better demand for house coal, especially for the London market, and an increased tonnage has been sent over the Midland from Clay Cross, Blackwell, Langley Mill, Eckington, and other collieries. But although stocks are being cellared for the winter prices remain without alteration; merchants, however, have been able to keep up the shilling advance recently made by them, so that they are the persons who really secure a profit, and this will continue to be the case until colliery proprietors take the trade into their own hands and sell direct to the consumer, by which both would be benefited. Steam coal is dull, and comparatively little is being sent away for shipment. In engine fuel there has been very little change, so the requirements of manufacturers have in no way increased.

In Sheffield business is much the same as it has been for some weeks past, and while a few of the manufacturers are fairly off for work the bulk are just the reverse. The heavy armour-plate mills are going along steadily, but are by no means active. On Saturday last the visitors to the Church Congress had the opportunity of witnessing the rolling of some plates for one of our war vessels now on the stocks, and of this many availed themselves. Ship and boiler-plates are in moderate request, and there has been a fair output of hoop-iron. In heavy material quietness still prevails, whilst there is not so much doing at the foundries in light castings. The Bessemer establishments are still working very well in rails, and there is also more doing for other branches. Some of the crucible steel works are rather better off, especially in wheels and axles, but the trade generally is dull. For the best qualities of table cutlery some orders have come to hand for the home and other markets, but several houses are still but moderately employed. The machine and engine works are still very quiet, and a considerable number of the workmen are on short time. For tools and light implements there is a steady demand, Australia being a good customer, whilst but little is doing on American account. There is now some prospect of the strikes at several of the collieries in South Yorkshire, which have lasted for a very long time, being amicably arranged. At Dodworth Silkstone, where the men have been out for about a year and a-half, an agreement has been come to, and whilst the non-Unionists will be kept going, they will be put as far as possible into a different part of the pit from the old hands.

At Woolley the efforts to compromise matters failed, and a great many houses are still empty, the place being truly a deserted village. At Manvers Main hopes are entertained that the men will shortly be at work, for the strike has been a heavy drag on the funds of the Union. The coal trade is decidedly better than it has been at the collieries between Sheffield and Barnsley, and many of them are now working five days a week, and a few even more. There has, however, been no material increase in the business doing with the Metropolis, and this is owing in a great measure to the rate charged by the Great Northern. The proposal to have the coal conveyed by water *via* Boston Deeps, does not meet with support on the part of the colliery owners, the one great drawback being the putting of the coal into sacks, which would be an undertaking that no one would venture upon. Many collieries turn out 1000 tons of coal a day, and to put a quarter of that into sacks and weigh them would be a task that would revolutionise the mode of working at the top, and be a serious expense. Were the sacks left out of the question then the scheme would meet with a considerable amount of support, as colliery owners would only be too glad to become independent of the Great Northern Railway for reaching the London market.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

Oct. 10.—I leave the readers of the Journal to judge between Mr. Robert Knap, of the Llanrwst Mine, and myself, and pass on.

The recent annual meeting of the Minera Lead Mines Company passed off amidst mutual congratulations, as well it might, with a profit on the year's working of 42,465*l.* 10s. It was a graceful thing to make an old servant like Mr. Fraser a retiring allowance of 160*l.* a-year and a gift of 100*l.* towards the expense of removal. Nor will any one grudge the directors the amount of their remuneration. The only jarring note in this congratulatory meeting was the complaint that the men were earning more than miners in other districts. I never back men up in unreasonable demands, but was not this remark ill-advised? Is not the mine doing better than other mines, and are not the shareholders, and directors, and superior servants of the company faring better than numbers of their kind in other districts? The men do not complain of this, and why should the superior servants grudge the men their earnings? Why in the midst of success at Minera should the men be reduced to the standard of depression and adversity prevailing elsewhere? Besides, I presume the managers pay no more than the market value of mining labour in the Minera district, and that should suffice. The remarks were not what we should have expected from the speaker.

A slight improvement has recently been discernible in the coal trade, but stocks are very large. A colliery recently closed has, it is said, an accumulation of 24,000 tons. A fire has been interrupting work at the Black Park Colliery lately, but the new shaft is now down to the coal, which will in some measure obviate the inconvenience. The Drill Colliery, south of Oswestry, is opening out a field of untouched coal northwards towards the town. A little more life and fire are observable at the ironworks.

Mr. Hall, Her Majesty's Inspector, has issued a circular to the collieries urging greater caution in the use of lamps, the prohibition of lamps being carried past the lamp station without being locked. The firemen are also to report the exact condition of the mine in addition to an expression of opinion, stemmers are recommended to be made of wood, but if made of iron and copper tipped the tip to be 6 in. long, and the stemmer to be stamped with the colliery stamp before they are allowed to be used. All lamps are to be numbered, and the lamp to be constantly used by the same man. These are all wise instructions, albeit they do not recommend much that is not already practised at well ordered collieries.

The hopes entertained of the recovery of Mr. G. H. Whalley, M.P., have not been realised. Mr. Whalley died at the Tower, Garth, near Llangollen, on Monday last at noon, aged 65 years. The district owed a good deal to the deceased gentleman. He took a prominent part in the origination and development of portions of the Cambrian and Mid-Wales Railways. He also brought a good supply of pure water to the large mining population of Cefn, in the midst of which he lived. His efforts to benefit the condition of communities were not, however, confined to his own locality. He spent much time and money in the endeavour to establish fisheries on the west coast of Ireland, and was the inaugurator of a scheme which had for its object the supply of London with pure water from the head waters of the Severn and the Wye. We admire Mr. Walley's indomitable courage and persistency, his shrewd practical business habits, and his useful and benevolent projects, and we only smile at his weakness, in which, however, he was consistent, relative to the Jesuits and the Claimant.

I have just returned from a run through Carnarvon and Merioneth. A little improvement, but only a little, is observable. Port Dinorwic seemed very quiet indeed. Carnarvon port showed more signs of business, and most of the ships which crowded the port in the early summer have now sailed with cargoes. But the stocks of slates at Mold junction, and on the quays at Carnavon and Portmadoc, are very large. The production has been going on at the usual rate during the period of depression, and it will take some time to move the stock off. I believe it will be a question for consideration at the meeting of masters, shortly to be held, whether the time worked at the quarries should not be reduced to four days per week. The smaller quarries have suffered the most lately, for the tendency of the slackness of trade has been to cause the merchants to gravitate towards the larger quarries, on whose books they found it impossible to get placed when trade was brisk.

In his paper "On Mines and Mining" Mr. T. Fanning Evans strongly condemns, as it has often been condemned in these pages, the mining gambling of which Wales is made the object by unprincipled speculators. While acknowledging the many good qualities of Welsh miners, Mr. Evans thinks that one reason why more of them are not made managers of mines is owing to their neglect of the necessary studies, by reason of their preference for music, which he terms mediocre. Possibly more attention is given to music by the Welsh miner than to some other studies; but it is his relaxation, and the love of severer and more practical studies is on the increase, and are the Cornishmen and others who are appointed better technically educated? Besides, are not the managers of our most successful mines Welshmen and Bordermen? May not the great reason why Welshmen are not more largely chosen as captains lie in that gambling nature, to use no stronger term, of mining undertakings which Mr. Evans so justly and strongly condemns? There is great wisdom in the paper, and it deserves the careful consideration of Welsh miners and those whom they serve.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

Oct. 10.—As previously intimated, the local Coalowners Association have decided upon the advisability of opening a permanent fund for the relief of colliers injured, or the relatives of those killed accidentally. At a meeting of delegates, held at Merthyr this week, the following resolution was passed:—"That this meeting is fully convinced of the wisdom and expediency of providing a permanent fund to meet every case of accident that may occur in the collieries of Monmoutshire and South Wales; they, therefore, accept the proposition of the Masters' Association, and establish a Miners' Permanent fund, and appoint a committee to-day to meet the masters to try and draft out a scheme, such scheme to be afterwards submitted for confirmation or rejection by the workmen." The men's sliding scale committee representatives were appointed the committee alluded to. This was the principal business done at the meeting.

Two explosions have since last report occurred in the district. One has been at the Dowlais Colliery, at Cwmbargoed, by which two boys and a man were seriously burnt, and the cause of this is attributed to the carelessness of the boy. In the other case six men were injured by an explosion of gas at Coalbrook Dale pit, Nant-y-Glo. One of the men is expected not to recover. No clue to the cause of the explosion is forthcoming.

The Landore (Siemens) Steel Company have secured a gold medal of the highest order of merit for special makers of steel, and no doubt this will bring grist to the mill at these important works. At the Paris Exhibition, among the lists of awards in the British section the following local names occur:—Silver medals, Abernant Ironworks and Collieries Company and Wayne's Merthyr Coal Company.

The Iron Trade certainly shows some few signs of improvement, but these are confined to only a few of the works, and are apparently the exceptions which go to prove the rule. There is no better demand for rails, and it is getting more and more apparent that steel is rapidly superseding iron for railway purposes. The make of steel is large, and increasing, and month by month we hear of facilities being given for its manufacture. While steel rails sell at such a slight advance on iron it is no wonder that buyers should prefer the former. The new Blaenavon works have made a practical start during the last few days. There is not the slightest change for the better in prices for iron. Bars have of late been in rather better request, and the make has been rather larger, but there is no increase in quotations, nor is there likely to be while the Belgians can undersell us in the commoner descriptions. Clearances have been rather larger, and include a shipment of about 1800 tons to India.

It appears that the restriction in the make of tin-plates will be carried out generally, or at any rate in very few exceptions. Notices to terminate existing contracts by the first Monday in November have been posted at many of the works, and the men are in these told that they will have to work four days instead of six. It is not believed that the restriction will have any material effect till the beginning of the new year.

The Coal Trade has not materially changed, and what alteration has taken place has not been for the better. Shipments have to a considerable extent fallen off, yet there is a fair demand for steam qualities, and house coals are, although somewhat quiet, in rather better request. Prices for the former are low and unaltered—for the latter not quite so firm. Freights have improved a little. The Cymmer dispute continues, and there seems no probability of a settlement. The patent fuel trade is more active than it has been for some time past, and several good orders are reported to be in hand. The list of dead at Abercarn has been increased by two, the number now standing at 268.

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

During the past week the announcement of several extensive failures arising from the stoppage of the City of Glasgow Bank having been anticipated had little effect on prices, and even in some cases a slight improvement set in from the extreme depression of the previous week. Latterly the downward tendency has returned on rumours about a great coal and iron firm which would prove an awful crash. Such rumours, if incorrect, are much to be regretted, but on all hands gloomy uncertainty is felt as to the direct, and justly feared indirect, consequences of the bank disaster; for it is only as engagements of one kind and another fall due that the test will be applied. In regard to trade, the feeling is that it will be bad for some time yet, during which it will be found to have become much sounder, and this view is borne out by the Board of Trade Returns issued for September.

In shares of coal and iron companies, Cairntable Gas Coal shares are wanted at 5s. advance, but Benhar and Bolckow, Vaughan, A, have both declined 15s.; Marbella 5s., and Glasgow Port Washington 2s. 6d. Richards and Company offered. The Antrim Iron Ore Company cannot pay dividend for last half-year's working. The Silkstone and Dodworth Coal and Iron Company have come to an arrangement with their miners on strike, by which work will be restored. Bilbao, 21. Bolckow, Vaughan, A, 57; and 5 per cent. preference, 19½. Cammel and Co., 5½ dis.; and ditto 5 per cent. debentures, 102½. John Brown and Co., 11¾ dis. New Sharlston (pref.), 55s. to 65s. Sheepbridge, 2¾ dis. Staveley, A, 9 prem. Tredegar, B, 19. West Mostyn (pref.), 20s. Whitwick, 70s.

In shares of foreign copper and lead concerns, Cape are 10s. and Tharsis 2s. 6d.—both higher, while Rio Tinto 5 per cent. and Tharsis (new) are both reduced 1*l.* Huntington 11s, Yorke Peninsula (pref.) 2s. 6d., and Rio Tinto 7 per cent. 1s. 3d. Tharsis have been very steady—between 22¾ and 22. The drawing of mortgage debentures in the Panulcillo is to be held on Oct. 15. The Cape return from Ookiep for August is 975 tons of 29 per cent. Linares are at 85s. New Quebrada, 35s. Rio Tinto 5 per cent., 61¾. Yorke Peninsula, 3s. 9d.; and ditto preference, 15s. to 17s. 6d.

Shares of home mines are depressed. The metal markets present no improvement for lead and tin. The latter is particularly weak, and all the deep mines are expected to be closed up. Copper is in comparatively better demand, and its prospects more encouraging. The next sale of the Glasgow Caradon is computed 200 tons copper ore, to take place on October 19. This is about the same quantity as for the preceding three months, but for many years back the October sale has always been from 235 to 300 tons. In lead shares some parties are looking for a great rise in Clementina. The Great Laxey dividend is announced at 6s. per share, payable on October 22, and the annual report of this company shows how severely the state of trade is affecting them. The name of the reconstructed West Tankerville Company is East Roman Gravels, and the capital 30,000*l.*, in 1*l.* shares. For every 1*l.* share applied for there will be granted two bonus shares fully paid, thus the cost of a share will stand at 6s. 8d. It is calculated 3000*l.*, or equal to a call of 10s. per share on the first issue, will develope the mines sufficiently to get ore to last for years. Bampfylde are at 5s. Bodidris, 10s. to 15s. Cambrian, 40s. Clementina, 30s. Devon Consols, 32s. 6d. Great Laxey, 17½. Killifreth, 1s. Leadhills, 45s. Parys Mountain, 6s. Roman Gravels, 7. St. Patrick, 9s. 6d.

In shares of gold and silver mines business is very dull. Richmond has been steady all the week. Attention has been directed to Exchequer and I.X.L. by the curious means employed to raise capital. It is of course a difficult matter to raise capital at present, but it does seem that the means employed to do so in this case are, if the mines are good, rather derogatory to the high names by which it is introduced. If the scheme succeeds it is as well to bear in mind that the Exchequer capital is double that of I.X.L., while the tunnel from the Isabella would cut the lodes of the latter first. The tunnel, however, would take longer than estimated—likely two years. A profit would be made at the Exchequer and I.X.L. mills on any ores sent there which might be found in making the tunnel now commenced, and the directors state they anticipate to pay a dividend before the end of the year. The Eberhardt and Aurora Company are going to raise 20,000*l.* as authorised at the last meeting. Colorado shares are improving, owing to the favourable advices from the mines; the product for September was $ 0,000. The returns of Pestarena United for September are 817 tons, averaging 11 dwts. 7 grs. Exchequer 12 per cent. bonds offered. Birdseye Creek are at 14s. 6d. Cedar Creek, 4s. 6d. Eberhardt, 87s. 6d. Emma, 2s. Flagstaff, 10s. Frontino, 47s. 6d. Javali, 8s. Port Phillip, 10s. to 12s. Santa Barbara, 28s. to 28s. South Aurora, 2s. 6d. to 5s. Tecoma, 2s. 6d. to 5s. United Mexican, 70s.

In shares of oil companies Young's Paraffin are 6s. 3d., and Uphall 5s.—both higher. Young's Paraffin have fluctuated between 13⅝ and 14. Runcorn Soap and Alkali are at 6¼ dis. There is no movement in shares of miscellaneous companies of much importance. Earle's Shipbuilding are better at 12½ on hopes of the dividend increasing. A call has been made of 1*l.* per share on Hopkins, Gilkes, and Co.; as there are 45,000 of these shares the capital thus raised should be 45,000*l.*—the shares are at 10½ dis. Palmer's Shipbuilding, B, are at 12½ dis. Wagon companies' shares are neglected. In chemical companies Langdale's are lower at 85s. to 95s., but Lawe's are better at 8¾ to 9¼, ex div.

The following calculations show the yield per cent. on the money invested at present prices in the shares named, based upon the last average yearly dividends being maintained:—In coal and iron companies, Andrew Knowles and Sons would yield 10; Antrim Iron Ore, A, 2⅝; ditto, B, 2¾; Bolckow, Vaughan, A, 5⅛; ditto, B, 4⅛; C. Cammell and Co., 8; ditto 6 per cent. debentures, 5¾; ditto 5 per cent. debentures, 4½; Henry Briggs, A or B, 3; John Brown and Co., 6; ditto 5 per cent. preference, 5; Parkgate, 3⅝; Staveley, A, 5½; ditto, B, 5⅝; ditto, C, 5⅝; ditto, D, 5¼; and ditto 5 per cent. preference, 4⅝. Great Laxey Mine would yield 10¼; and St. John del Rey, 12¼. In Wagon companies, Birmingham would yield 9½; British, 7½; Metropolitan, 6⅝; Midland, 6¾; North Central, 7⅛; Sheffield, 7½; and Yorkshire, C, 7⅝. Among miscellaneous investments Earle's Shipbuilding may be named to yield 7½; and Milner's Safe, 5¼.

There is still very little demand for home mining properties, as when bought to be formed into companies, as is usually the case, it is found the public are subscribing for such shares, or indeed any others, the reverse of freely. Consequently such companies as are started are not being introduced at prices in accordance with the market values. At the Halkyn tunnel good speed is being made, and it is said they have tapped a small feed of water within the last few days. Rhyd Alyn is to sell 40 tons of lead at the Holywell ticketing to-day, and the mine looks well. Very satisfactory advices are being received from the Victor Mine, and it is gradually improving. North Hendre is reported also to have improved at several points. The D'Eresby Mountain district continues to attract attention, and is no doubt a fine field for mining. Purchasers are enquiring for any cheap setts there. Prince Patrick shares have been in request, as it is expected they will double in value when the discovery becomes more generally known. It is the best find made in the district for years, and turning out very rich. The ore course is getting stronger every day, and many tons of solid lumps of lead have now been brought to surface, some of them running 3 cwts. in a lump.

THE PARACOMBE SILVER-LEAD MINE.—This property is situate in the parish of the same name in North Devon, and about three miles to the east, and on the same lodes as the once productive Combmartin Mines. The sett is about ⅝ mile in length by ¼ mile wide, and traversed by eight lodes. Only two of the lodes have as yet been opened upon, and average samples of the ore at a shallow depth give an assay of 15½ in 20 for lead and 13½ ozs. of silver per ton. There is every advantage on the property for pumping and dressing the ores by water power. At the last meeting of shareholders it was decided not to call up more than 30s. per share, and to hold quaterly meetings, when, if required, calls of 1s. or so per share would be made. The mine is in 6000 shares.

OMOA AND CLEVELAND IRON AND COAL COMPANY (Limited).—The report for the year ending June 30 to the seventh annual meeting of this company stated the results of the year's working had not been satisfactory. The output of coal had been restricted as far as possible, and the strictest economy studied in every way, but fixed charges have always to be met. The stock of calcined ironstone had to be disposed of at a low figure to meet obligations. The output of composition bricks and fireclay goods has been greater, but prices have declined, owing to the prevailing stagnation in the building trade and other causes. As regards the future of the coal trade it does not exhibit any signs of improvement, but prices are now so low that further reduction appears unlikely. The demand is very slow, and at unremunerative prices, still the competition is unprecedentedly keen. The directors consider that if the company is to be tided over to better times some scheme of re-organisation will require to be resorted to. They have been granting their personal obligations to the Bank to carry on the business, but it is not to be expected they can continue to do this.

J. GRANT MACLEAN, Stock and Share Broker.
Post Office Buildings, Stirling, October 10.

CHEMICALS, MINERALS, AND METALS.—Messrs. J. Berger Spence and Co. (Oct. 5)—Alum: Loose lump, 6*l.* 7s. 6d. to 6*l.* 10s.; ground, 7*l.* 5s.—Arsenic: Best white powdered, 8*l.* 10s.—Borax: Refined, English, 36*l.*—Copperas: Green, 52s. 6d.; white, 8*l.* 7s. 6d.—Copper: Sulphate, 19*l.*—Nitrate of Lead, 31*l.* 15s.—Saltpetre: Refined English, 27*l.* 10s.—Sulphate of Zinc, 12*l.* 12s. 6d.—Sulphur: Roll, 8*l.* 10s.; flowers, 10*l.* 10s.—Tin crystals, 6½d. per lb.—White Lead, 21*l.* 5s.—Barytes: Carbonate, 100s.—Brimstone: Best thirds, 5*l.* 10s.—China-Clay, 38s.—Oxide of Zinc, 22*l.* 10s.—Talc, 5*l.*—Umber, 70s.—Charcoal: Best stick, 4½d. per bushel; field burnt, 6d.—Globe Steam-Boiler Powder, 20s. per cwt.—Naphtha, 60 per cent., 3s. 8d.

Original Correspondence.

PANT-Y-MWYN LEAD MINING COMPANY.

SIR,—In reply to your anonymous correspondent "Miner of Mold," whose letter was published in your widely-spread and earnestly-read Journal of last week, I must request you to give equal publicity to the following challenge. If, as I suspect, your correspondent is a miner of repute, as otherwise you would not have accepted his cognomen, I hereby undertake to meet him on the mine, conjointly examine the workings, the principles of development, value of points of operation, and amount of reserves. If he acts with fairness and justice to Capt. Hughes, and in honesty as to the value and intrinsic worth of the property, I will risk my reputation as a miner of forty years' practical experience against his that my observations as to the soundness and economy of Capt. Hughes' management are only just and deserving, while I contend that the reserves in store from discoveries already made, and the worth of the several levels and sinkings, far exceed my estimates. Your correspondent has only to forward his card through you to ensure an early meeting at the works to settle all divergence of opinion between us.

Oct., 11. JOHN METHERELL.

PANT-Y-MWYN.

SIR,—In the Journal of last Saturday there appeared an advertisement of 100 Pant-y-Mwyn shares for sale at 2*l.* 10s. In answer to my letters applying for some I was informed the lot could not be divided at that price, but that I might have the number I required at a price nearly double that advertised at. This fact I consider sufficiently illustrates the object of the advertisement, and on that ground I trust you will kindly grant this space in your columns.

London, Oct. 11. E. JONES.

[For remainder of Original Correspondence see this day's Supplement.]

A UNITED STATES PATENT HAS BEEN GRANTED to MR. HENRY SEWELL, M.E., for the REDUCTION or ELIMINATION of SULPHUR from Native Sulphur Ores, without Fuel, Water, or Iron Retorts. These furnaces are made of common stone, costing $200 each, and having a capacity of 200 tons of ore, at one time. They last many years. Five of these furnaces can be handled by two men—one by day, and the other by night that is, 1000 tons are worked at one time by two men.
Salt Lake City, Utah Territory, July 17, 1878.

GOLDENHILL COBALT, NICKEL, COLOUR, BORAX, AND CHEMICAL WORKS,
NEAR STOKE-UPON-TRENT, STAFFORDSHIRE
JOHN HENSHALL WILLIAMSON, MANUFACTURER AND REFINER
Purchaser of Borate of Lime and Tincal.

COAL MINES REGUATION ACT, 1872.

EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.

DISTRICT UNDER THE CHARGE OF JOSEPH DICKINSON, Esq., H.M. INSPECTOR OF MINES.

PERSONS desirous of being EXAMINED in this District for MANAGERS' CERTIFICATES OF COMPETENCY, under the above named Act, should at once COMMUNICATE with the Secretary to the Board of the above-mentioned District, at the following address:—King-street, Wigan, Lancashire.

By order of the Board,
MASKELL W. PEACE, Secretary.

N.B.—Persons who do not reside within the District are equally eligible for examination with those who do.

£10 REWARD.—I, CHARLES T. GILBERT, of the PHŒNIX BLUE BRICK AND TILE WORKS, Hingston Down, Gunnislake, Calstock, proprietor of a Patent granted to FREDERICK ARTHUR COWELL, of Gunnislake, Calstock, in the county of Cornwall, for the INVENTION of IMPROVED NON-POROUS and VITRIFIED BLOCKS, BRICKS, and other articles for various purposes, the said articles being manufactured from either or both the rocks known in the counties of Devon and Cornwall by the names of "killas" or "elvan," hereby give notice I will pay the above reward to any person or persons giving such information to my undersigned solicitor as will lead to the conviction of any person or persons INFRINGING the RIGHTS of the said PATENT. (Signed) CHAS. T. GILBERT.

Witness—CHRISTR. V. BRIDGMAN, Solicitor, Tavistock.

Dated this 3rd or September, 1878.

THE YORKSHIRE COLLEGE
FIFTH SESSION, 1878-9.

COAL MINING DEPARTMENT.

Instructor—ARNOLD LUPTON, Esq., Mem. Inst. C.E., F.G.S.

THE CLASS will MEET at the COLLEGE on MONDAYS at 5·30 P.M., from October to June, for INSTRUCTION in the THEORY and PRACTICE of COAL MINING, MINING ENGINEERING, and COLLIERY MANAGEMENT. The first meeting of the Class for the Session will be on Monday, Oct. 21, 1878.

Class fee, £3 3s.; Sessional fee (in lieu of entrance fee), 7s.

The PUBLIC INTRODUCTORY LECTURE will be delivered by Mr. LUPTON in the Philosophical Hall, Park-row, on MONDAY AFTERNOON, Oct. 14. Chair to be taken at half-past Five by RICHARD CARTER, Esq., C.E., F.G.S., President of the Midland Institute of Mining, Civil, and Mechanical Engineers.

Admission free. Prospectuses free by post.

The attention of candidates who are preparing for the examinations for mining certificates is specially called to this course of instruction.

Leeds, Oct. 1, 1878. W. F. HUSBAND, Secretary.

PERFORATED PLATES,

For all MINING and MECHANICAL PURPOSES, in IRON, STEEL, CAST STEEL, ZINC, COPPER, and BRASS.

Delivered, carriage free, to any English Port on the East Coast.

Price List gratis and prepaid.

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THOMAS BROTHERS,

MINING SHAREBROKERS AND MINERAL SURVEYORS,
STRAND CHAMBERS,
STRAND STREET, LIVERPOOL.

THE

TRELLYNIA LEAD MINING CO.

(LIMITED),

HALKIN MOUNTAIN, FLINTSHIRE.

Capital £10,000, in 2000 Shares of £5 each, fully paid.

MESSRS. THOMAS BROTHERS, Strand Chambers, Strand Street, Liverpool, have much satisfaction in being able to offer for public subscription a limited number of shares in this company, at par, and believe that a careful perusal of the following particulars will justify the feeling, and convince the reader that it would be difficult to find a more favourable medium for the investment of a moderate amount of capital.

Trellynia Mine lies in the centre of a highly mineralised district, and is surrounded by well known and dividend paying mines. Being only 1½ mile from Nannerch Station on the Mold and Denbigh Railway it is very accessible for investors who like to visit the properties in which they put their money.

Considerable quantities of lead ore were raised by former workers from a series of shallow pits sunk on the outcrop of the various lodes; the present company has cleared up and extended the old workings and sunk a new shaft to a depth of 60 yards, in the carrying out of which work many tons of lead ore (as much as 40 tons in a month) have been brought to surface and sold.

Trellynia is the focus or concentrating point of a number of well known lodes running through two of the adjacent mines, and as such junctions are invariably very productive, it is only reasonable to expect a large body of ore will be found when the new works reach the point of intersection of the lodes.

The bottom of the mine being more productive than the shallow levels and pits, and there being many indications of increased richness as further depth is attained, it has been decided to sink the shaft below the 60 yard level and drive in the direction of the junction of lodes; to do this advantageously improved winding apparatus is required, and to provide it the shares now offered have been issued.

Trellynia is not a new or purely speculative mine, nor is it an abandoned mine, the working of which can only be resumed at great cost; but it is a fairly remunerative undertaking, needing only a little further capital to make it a great success.

During many years experience in mines, mining companies, and other industrial ventures, Messrs. THOMAS BROTHERS scacely remember a more favourable opportunity for a small, permanent, and profitable investment, and, therefore, confidently recommend it to your serious consideration.

Applications for shares should be made to us without delay, from whom also any further information can be obtained.

THOMAS BROTHERS,
STRAND CHAMBERS, 5, STRAND STREET, LIVERPOOL.

Prize Medal—International Exhibition, 1862.

CHAPLIN'S PATENT PORTABLE STEAM ENGINES

FOR PUMPING AND WINDING,
SPECIALLY ADAPTED for PITS, QUARRIES, &c.
SIMPLE and STRONG; require NO FOUNDATION or CHIMNEY STALK, and are EASILY ERECTED or REMOVED.
Sizes, from 2 to 30-horse power.

Steam Cranes, 1½ to 30 tons, for railways, wharves, &c.; hoist, lower, and turn round in either direction by steam.

Stationary Engines, 1 to 30-horse power, with without gearing.

Hoisting Engines, 2 to 30-horse power, with or without jib.

Contractors' Locomotives, 6 to 27-horse power.

Traction Engines, 6 to 27-horse power.

Ships' Engines, for winding, cooking, and distilling passed by H.M. Government for half water.

Steam Winches. Engines and Boilers for light screw and paddle steamers.

WIMSHURST, HOLLICK, & CO.,
ENGINEERS.

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WORKS: REGENT'S CANAL DOCK, 602, COMMERCIAL ROAD EAST, LONDON, E. [near Stepney Station.]

In the High Court of Justice—Chancery Division.

FORSTER v. FORSTER.

IMPORTANT AND VALUABLE COLLIERIES AND LIMESTONE QUARRIES FOR SALE.

IN PURSUANCE of an Order of His Lordship the Master of the Rolls, TENDERS are INVITED for the PURCHASE, in One Lot, of the IMPORTANT LEASEHOLD SEASALE COLLIERIES, called EAST HETTON COLLIERY, comprising 2740 acres or thereabouts; and TRIMDON GRANGE COLLIERY, comprising 854 acres or thereabouts; also, the adjacent VALUABLE RAISBY HILL LIMESTONE QUARRIES and LIME WORKS (principally leasehold, but partly freehold); also, a FREEHOLD ESTATE and LANDS, comprising about 144 acres, all situate near Hartlepool, in the county of Durham, together with the COLLIERY PLANT of PITS, ENGINES, engine-houses, locomotives, machinery, railways, screens, stores, materials, live and dead stock, coke ovens, agents' and workmen's houses, workshops, stables, granaries, quarry stock and chattels.

The collieries are in connection with the Hartlepool branch of the North-Eastern Railway Company's system, being respectively within 14 and 10½ miles of the port of Hartlepool, and 16 and 12½ miles of West Hartlepool, and are also in connection with the main line at Ferry-hill, from which they are respectively five and six miles distant, and are thus well situate for sending their produce to the southern markets, to the Tyne, Sunderland, Middlesborough, and Cleveland, or over sea.

The quarries are in full operation, and the limestone is well known in the market, and is now extensively used in some of the largest ironworks in this district and in Cleveland, and is also largely used for chemical purposes, and the proximity of the works to the North-Eastern Railway facilitates the delivery of large quantities at all times with the utmost promptitude and regularity.

Tenders to be sent (in a sealed cover, marked in the corner "Forster v. Forster") to CHARLES BURNEY, Esquire, the Chief Clerk of His Lordship the Master of the Rolls, at his chambers, No. 10, Chancery-lane, London, on or before the 31st day of October, 1878.

Particulars, plans, conditions of sale, and forms of tender, may be obtained on application to Messrs. TRINDERS and CURTIS HAYWARD, Solicitors, 4, Bishopsgate-street Within, E.C.; T. W. DENBY, Esq., 8, Frederick's-place, Old Jewry, E.C.; J. ANDERSON ROSE, Esq., 11, Salisbury-street, Strand, W.C.; G. B. FORSTER, Esq., Backworth, Newcastle-on Tyne; W. O. WOOD, Esq. (the Viewer), East Hetton Colliery, Coxhoe, County Durham; MATTHEW FORSTER, Esq. (the Receiver), 1, Doctor Johnson's-buildings, Temple, E.C.; and R. F. MATTHEWS, Esq., Seaton Carew, West Hartlepool.

Orders to view can be obtained by written application to Messrs. TRINDERS and CURTIS HAYWARD, or G. B. FORSTER, Esq.

CALDBECK FELLS (CONSOLIDATED) LEAD AND COPPER MINING COMPANY

(LIMILED). *IN LIQUIDATION.*

THE LIQUIDATORS OF THIS COMPANY are prepared to SELL, BY PRIVATE TREATY, the VALUABLE LEASE (42 years unexpired) of these MINES, together with the ENGINES, WATER WHEELS, DRESSING MACHINERY, and other PLANT on the SETT.

Railway communication in course of construction within a few miles of the mines.

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TO BE SOLD, BY PRIVATE TREATY, the GREENHAUME HEMATITE IRON ORE MINES, near DALTON-IN-FURNESS, in the heart of the Furness Hematite District, including the unexpired term in the mineral and cottage leases, together with the MACHINERY, PLANT, and STOCK of IRON ORE now at bank.

Full particulars as to the leasees and plans, with an inventory of the machinery, plant, and iron ore, can be seen on application to JOHN S. SAWREY, at the offices of Messrs. SALMON and MAJOR, Solicitors, Ulverston.

Magistrates Office, Ulverston, 1st October, 1878.

FOR SALE, BY PRIVATE CONTRACT, an existing LEASE, on low royalties, for a long term of years, of the No. 3 RHONDDA and STEAM COAL SEAMS, lying under a compact single mineral property of nearly SEVEN HUNDRED ACRES in extent, situate in the county of GLAMORGAN, adjoining and connected with a public line of railway.

Also, OPENED LEVELS upon the No. 2 RHONDDA SEAM of COAL, in the same property, with the PLANT, BUILDINGS, TWENTY WORKMEN'S HOUSES, MANAGER'S HOUSE, and PUBLIC HOUSE.

The depth to the No. 3 Rhondda, near the deep side of the property, is estimated to be under 100 yards.

Also a LEASE of the SURFACE, which is well wooded and watered. The Farming Stock upon the premises to be taken at a valuation.

For further particulars and to treat, apply to Messrs. BROWN and ADAMS, Guildhall Chambers, Cardiff.

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FOR SALE, a SILVER-LEAD MINE, situated in CORNWALL, in the same strata of silver-lead bearing ground as the celebrated Wheal Mary Ann and Trelawny Mines. Prospects excellent. Easy price and terms.

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GREAT CARADON MINE, NEAR LISKEARD, CORNWALL.

FOR SALE, BY PRIVATE CONTRACT, a 28 inch cylinder ENGINE, with BOILERS, &c.; 90 fathoms of 9 inch pitwork; 60 fathoms of 10 in. wood rods; strapping plates, &c.; 90 fathoms of ladders; capstan and shears, with capstan rope, horse whim, and whim rope; smiths' and miners' tools; and a quantity of old timber and iron.

Applications to view of Captain WILLIAM TAYLOR, Glasgow Caradon Consols Mine, near Liskeard, Cornwall; and all tenders to be sent to Mr. GRANVILLE SHARP, No. 2, Gresham Buildings, Basinghall-street, London, E.C., on or before the 1st day of November, 1878.

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Price ... ... £76.

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18 H.P. PORTABLE STEAM ENGINE, with link motion reversing gear, ready for delivery; also gear to wind and pump.

A 9-h.p. VERTICAL STEAM ENGINE, with link motion, reversing gear (winding drum if required).

A 6-ft. PAN MORTAR MILL, VERTICAL ENGINE, and BOILER, with carriage and travelling wheels.

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LEAD ERA MINING COMPANY

(LIMITED),

SITUATE IN THE PARISH OF LLANDIGLA, FLINTSHIRE.

Capital, £12,500, in 5000 shares of £2 10s. each.

Payment, 10s. deposit on application, and £2 on allotment.

First issue, 3000 shares at par £7500
Reserve, 2000 shares ..... 5000 = £12,500.

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DANIEL GREEN, Esq.

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SOLICITOR—EDWARD HOUNSELL, Esq., 8, Furnivals Inn.
LOCAL MANAGER AT THE MINE—Capt. JOSEPH A. EDE, Llanarmon, near Mold.
SECRETARY—Mr. JOHN LUTTMAN, Public Accountant,
OFFICES,—52, QUEEN VICTORIA STREET, LONDON, E.C.

PROSPECTUS.

The fully realised importance and value of the lead mines of North Wales renders unnecessary more than a passing allusion to those of Minera, Van, North Hendre, Pant-y-Mwyn, and East Pant-Du, it being well known that Minera, with a capital of only £45,000, has returned nearly £1,500,000, yielding £808,925 in dividends; that the Van Mine shares are to-day at a premium of 300 per cent. in the market, and that the three last named are also paying large dividends.

The richest lead-producing districts in the Principality are in Denbighshire and Flintshire, and the Lead Era Mine (the property of this company) is situated in the last-mentioned county. In these districts it is well known that there is more or less of the milistone grit formation, which, overlying the mountain limestone, has a direction nearly north and south. In this grant, and in this favourable rock formation, there are two well-defined "flats"—that is to say, beds—varying from 3 to 15 fms. in thickness, which are intersected by several distinct and champion lodes of lead of the first quality, it being too important not to be mentioned that the richest deposits are invariably found at and about the points where the lodes are intersected by cross lodes and cross courses. Such deposits of ore are productive, rich in quality, easily wrought, and developed with small expenditure of capital, in proof of which it is only necessary to refer to the several mines before mentioned.

The Lead Era Mine is in the midst of this well known great lead-producing locality, and comprising an area of 200 acres, has no less than five distinct champion lodes intersecting the flats which underlie its surface. The grant is held by licence from Sir William G. Williams, Bart., of Bodelwyddan, near Rhyl, and is defined by a map attached thereto. The licence is in favour of Joseph A. Ede and Richard Tredinnick for three years, with an agreement for 21 years lease whenever applied for, at a royalty of 1-12th, to be reduced to 1 16th on the lease being taken up. The whole of the ground is highly mineralised, and presents unmistakable evidence of great mineral and chemical action—similar, in fact, to other districts in which rich and profitable mines are found, the characteristics and prospects being altogether such as in the opinion of practical authorities will ensure early and important discoveries of lead ore.

It has been determined, with the object of promptly developing this property, to form a limited liability company, in 5000 shares of £2 10s. each, fully paid, of which the first issue will be 3000 shares at par. The remaining 2000 shares to be held in reserve, and not issued without the consent of a special or extraordinary general meeting of the proprietary. But in the opinion of competent authorities the proceeds of the present issue will prove ample to open out a prosperous and profitable mine unsurpassed throughout the Principality.

The only contract is one dated Sept. 4, 1878, between Joseph A. Ede and Richard Tredinnick of the first part, and John Luttman, as trustee on behalf of the company, of the second part. This, together with the Memorandum and Articles of Association, can be seen at the offices of the company, where prospectuses, forms of application, &c., can be obtained.

Attention is invited to the accompanying reports from mining authorities of high character, which fully enter into the merits and future prospects of the company's concession.

EXTRACTS FROM REPORTS.

This highly interesting mineral property, and its geological position, is situate in the milistone grit formation, overlying the mountain limestone, the course of which bears nearly north and south through the two shires of Denbigh and Flint, and at Lead Era is *de facto* the same formation as proved so productive and profitat Hendre Ucha, Gwern-y-Mynydd, Vawnog, Cribiolyn, Bryn-Gwyn, Pwyll-y-Wheel, Jamaica, and lastly East Pant Du, the most recently established prize in the district. The mines comprised as a whole, paid over a long series of years 70 per cent. annually on the aggregate capital. Lead Era possesses all the elements concentrated in its geological, geographical, and mineralogical character associated with all the mines referred to, and I am convinced that it will equal and probably surpass them in its ultimate yield of lead ore. The company's concession is traversed by two true bearing beds, ranging from 3 to 15 fms. in thickness; these are termed the upper and lower flats. . . . . The surrounding circumstances are favourable to the formation of large deposits of ore at Lead Era. As a practical miner, and having studied especially the stratification, while drawing my inferences and deductions from results actually achieved in adjacent and adjoining mines, I conclude that at the junction of the lodes and flats large deposits of lead ores are certain to be found at Lead Era Mine. . . .

The physical features of the stratification command especial attention. I have gone over and carefully considered the characteristics, and find them all that can be desired. It is evident that the varied strata have been subject to violent and frequent disturbances, as in places the bottom layer of the stratum becomes prominently conspicuous. The dislocation of strata is found invariably in the vicinity of rich mines, and I feel confident of abundant yield from the Lead Era lodes, and at shallow depths. Again, the configuration of the surface is favourable for adit and economical development. . . . Well knowing the general results of the junction of the lodes and flats throughout the whole districts, and thoroughly appreciating the prospects presented, I have much pleasure in attesting the true mineral worth of the Lead Era Mine, and in my judgment the expenditure of 1000*l.* will give you a property unsurpassed in yield and profits throughout this long prosperous and renowned district. WILLIAM ROBERTS.

East Pant-Du Lead Mining Company, August 12, 1878.

(Captain Roberts is himself returning, by aid of only ten miners, at East Pant-Du 40 tons of lead ore monthly, at a cost of but 200*l.*, while success was attained there in the first instance by an expenditure of less than 300*l.*)

Mount Pleasant House, Jamaica Mines, near Mold, Sept. 6, 1878.—The Lead Era property is situate about one mile west of the great Minera Mines, bounded east by the Old Creigiog, and north by East Pant-Du Mines.

Your mineral grant comprises a very extensive area of undeveloped ground, the stratification is limestone of a highly metalliferous and congenial character for producing lead, overlaid east by the chert and flat measures, flanked eastward by the coal measures, which constitute the strongest indications of good lead-bearing ground; as a rule, there is almost a certainty of great richess at and in the junction of the coal measures. This at once bears strong testimony to the wealth and excellence of your property. . . . The most prominent lode in your sett, and I challenge the Principality to prove its superior, is that of the great Minera. These results guarantee in my opinion the sterling wealth of your property, for its site in every point of view is favourable, and in the neighbourhood of the most successful group of mines throughout the Principality. . . . Having referred to the northern mines, I will now refer to other neighbours of importance, as for example East Pant-Du, Jamaica, Bryn Gwyn, Mount Pleasant, Hendre Ucha, Cribiolyn, Gwern y Mynydd, Cae fy-Nain, Fawnog, Frou Fawnog. Many of these mines paid 70 per cent. annually, and netted beyond the costs of opening fully £160,000 profits. These mines are all situate in the same formation as the Lead Era, and there is no earthly season why your mine should not prove equally successful.

It only requires a very moderate capital, concentrated as recommended, and a vigorous prosecution, to ensure at an early date highly satisfactory results—that is to say a paying mine, and that too of no ordinary character.

I have no hesitation in recommending your property to capitalists, believing that they will be handsomely rewarded for their outlay. PETER DYKINS.

It is situate upon the millstone grit formation overlying the mountain limestone, which carries its course nearly north and south through the counties of Denbigh and Flint, and in the same formation as that in which Hendre Ucha, Vawnog, Cribiolyn, Bryn-Gwyn, Pwll-y-Wheel, Jamaica, and East Pant-Du proved so productive. All of these mines were exceedingly rich and profitable. Your property, Lead Era, possesses all the elements that characterised the mines referred to, while, from its peculiar geological position, I am inclined to believe not only that it equals but may even surpass them in mineral wealth. . . . . To develope the property I advocate at first sinking a few pits to determine the true bearing and dip of the flats; when this is effected, then select the most advantageous positions for driving one or more levels on the lodes to meet the strikes in their junction therewith. These explorations can be carried out without the aid of pumping machinery from a deep valley formed at right angles with the strike of the beds. Thus it becomes apparent that development will prove rapid, cheap, and effectual, as facilities for mining are peculiarly enhanced—nay, unsurpassed—within my experience by the favourable conformation of the surface. Adits will command all five lodes, and as many more as enter from the Minera Mines standing away to the east, and these in entering the flats, are likely to prove eminently profitable. J. ANWYL EDE.

Truro Mines, Nerquis, Flintshire,

. . . . There is also a strong north and south lode which I propose driving upon, and from information I learn that ore has been discovered on the strike a short distance to the south of our starting point. I am very confident we shall be very successful here. I have been employed on the flats for ten years, and I have never seen a place which I could so confidently recommend.

J. ANWYL EDE.

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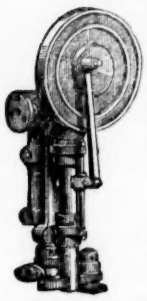

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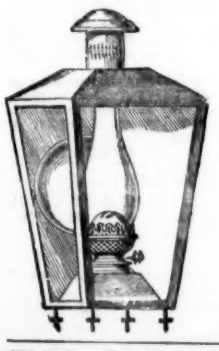

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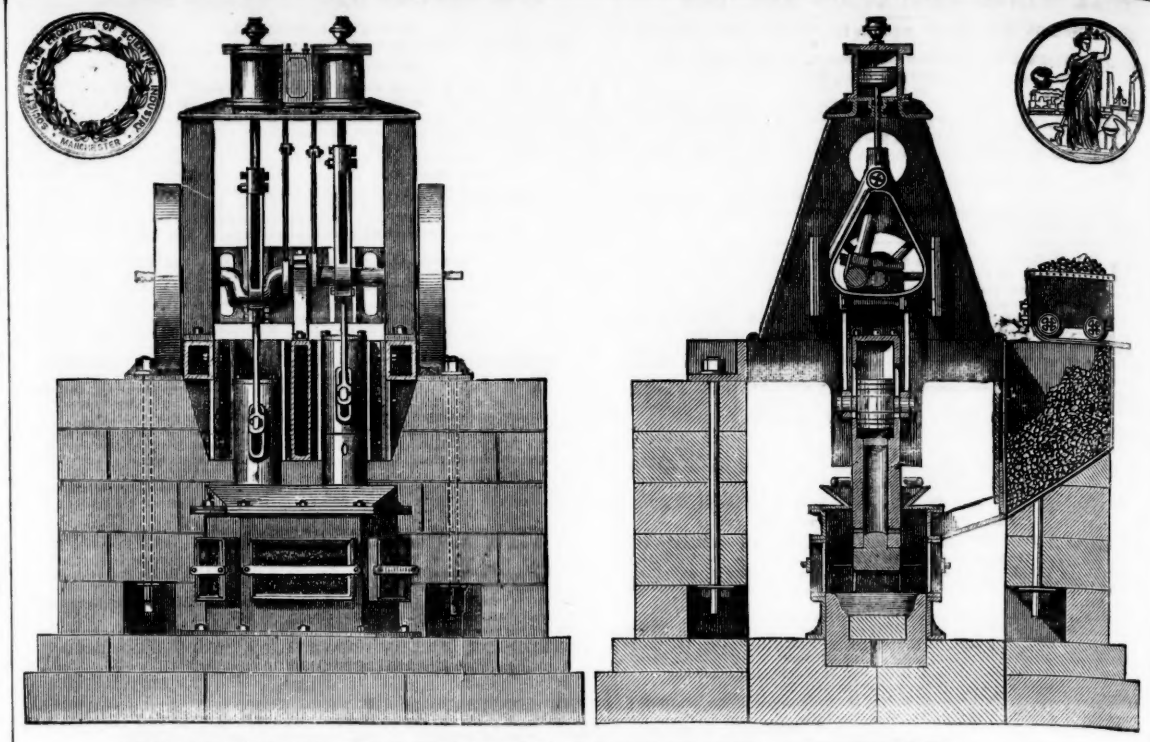

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GENTLEMEN,—I have much pleasure in stating that in the execution of your contract to drive, for the Ebbw Vale Steel, Coal, and Iron Company (Limited), a cross measure Drift from the Old Coal to the Rock Vein Coal, in the Glyn Pits, at Pontypool, you did so with dispatch, and to the entire satisfaction of all concerned. The distance driven was 453 yards in about 13 months.

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THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares	Mines.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
4000	Brookwood, c, Buckfastleigh	1 16 0	1	¼ 1	3 16 0	0 2 0	Nov. 1875
2000	Bryn Alyn,* l, Denbigh	10 0 0	—	—	0 7 0	0 7 0	Jan. 1877
10000	Caron, l, Cardigan*	2 0 0	2½	2 2¼	0 14 0	0 2 0	July 1878
1000	Carn Brea c, t, Illogan† §	53 7 6	35	27½ 32½	808 0 0	1 0 0	Feb. 1874
400	Cashwell l, Cumberland*	2 10 0	—	—	1 9 6	0 2 0	Aug. 1876
2450	Cook's Kitchen, t, Illogan† §	24 14 9	1½	⅞ 1½	11 17 0	0 7 6	Jan. 1873
10240	Devon Gt. Consols, c, Tavistock†	1 0 0	2	1½ 2	116 15 0	0 5 0	July 1877
4296	Dolcoath, c, t, Camborne	10 14 10	26	24 24	112 16 3	0 5 0	Aug. 1878
5000	East Black Craig,* l., Scotland	5 0 0	—	—	0 10 0	0 10 0	Feb. 1877
300	East Darren, l, Cardiganshire	32 0 0	—	—	235 10 0	1 0 0	Aug. 1876
5000	East Pool, t, c, Illogan	0 9 9	8½	8½ 9	15 11 9	0 2 6	Aug. 1878
40000	Glasgow Cara., c* [30,000 £1 p., 10,000 15s. p.]		1¾	¾ 1¾	0 13 10	0 0 6	Aug. 1878
7500	Gorsedd and Merllyn Cons., l, Flint	2 10 0	4¾	3¾ 4¾	0 5 0	0 5 0	Aug. 1877
5000	Great Laxey, c, Isle of Man*	4 0 0	18	17 18	24 5 0	0 6 0	Oct. 1878
615	Gt. Retallack, l, bl, Perranzabuloe	5 18 6	—	—	0 1 6	0 1 6	May 1876
5400	Green Hurth, l, Durham*	0 6 0	1	⅞ 1	1 18 0	0 3 0	Mar. 1878
30000	Grogwinion, l, Cardigan*	2 0 0	3	2¼ 2½	0 14 10	0 0 10	Aug. 1878
9830	Gunnislake (Clitters), t, s	5 5 0	2¾	2½ 2¾	0 13 9	0 1 0	Oct. 1876
6600	Holmbush, a, c, s-l, Callington*	1 0 0	—	—	0 4 6	0 0 6	Sept. 1877
2000	Isle of Man, l, Isle of Man*†	25 0 0	—	—	82 5 0	0 10 0	Feb. 1876
30000	Leadhills,* l, Lanarkshire	6 0 0	2½	2 2¼	0 15 0	0 3 0	Mar. 1878
400	Lisburne, l, Cardiganshire	18 15 0	60	55 60	586 10 0	1 0 0	May 1878
14000	Llanidloes,* l, Montgomery	3 0 0	1¾	¾ 1¾	0 9 0	0 4 6	Nov. 1876
9000	Marke Valley, c, Linkinhorne	5 3 6	¼	⅜ ½	7 15 0	0 2 0	Jan. 1876
10000	Mellanear Copper, Hayle*	2 0 0	4¼	3¾ 4	0 5 0	0 3 0	July 1878
9000	Minera Mining Co., l, Wrexham*	5 0 0	10	8 10	67 15 8	0 2 6	Sept. 1878
20000	Mining Co. of Ireland, ci, c, l*	7 0 0	—	—	23 17 6	0 2 6	Jan. 1878
444	North Busy, c, Chacewater	3 9 6	—	—	1 10 0	0 0 0	July 1877
10289	North Heudre, l, Wales	2 10 0	—	—	2 7 6	0 5 0	June 1878
30000	Panty Mwyn,* l, Mold (8794 iss.)	2 0 0	5½	5 5¼	0 3 0	0 2 0	Aug 1877
6000	Pedn an-drea Con., t, Redruth	0 8 6	—	—	0 9 0	0 0 9	June 1877
5000	Penhalls, t, St. Agnes	3 2 6	1	¾ 1	3 13 6	0 2 0	July 1875
6000	Pennant, l, bar, North Wales*	5 0 0	5	4 5	0 10 0	0 5 0	Mar. 1878
45793	Penstruthal,* t, c, Gwennap	2 0 0	⅛	4s. 6s.	0 2 8	0 0 8	Nov. 1875
18000	Prince Patrick,* s-l, Holywell	1 0 0	1¾	1¼ 1¾	0 14 0	0 1 3	Jan. 1876
10000	Red Rock,* l, Cardigan	2 0 0	2½	2 2¼	0 4 0	0 2 0	Jan. 1878
12000	Roman Gravels, l, Salop*	7 10 0	7⅛	6¾ 7⅛	7 15 0	0 5 0	Mar. 1877
512	South Caradon, c, St. Cleer	1 5 0	60	50 60	743 10 0	1 0 0	Sept. 1878
6123	South Condurrow, t, c, Camborne	6 5 6	11	10 11	4 1 0	0 8 0	Aug. 1878
12000	St. Harmon,* l, Montgom	3 0 0	3	2½ 3	0 12 0	0 3 0	July 1878
10000	So. Pr. Patrick,* s-l. (8000 sh. issued)	1 0 0	—	—	0 7 0	0 1 0	Oct. 1875
4500	South Wh. Frances, c, Illogan†	7 12 4	5¼	4¼ 5	37 5 0	0 5 0	Sept. 1878
12000	Tankerville, l, Salop*	6 0 0	4½	3½ 4½	4 17 0	0 5 0	Dec. 1876
6000	Tincroft, c, t, Pool, Illogan† §	11 10 0	7	5 7	50 8 6	0 5 0	May 1877
15000	Van, l, Llanidloes*	4 5 0	18	17 18	23 5 6	0 5 0	Oct. 1878
3000	W. Chiverton, l, Perranzabuloe†	12 10 0	5	3½ 4½	55 10 0	0 10 0	Feb. 1878
1783	West Poldice, St. Day	10 0 0	—	—	1 19 0	0 4 0	July 1876
512	West Tolgus, c, Redruth	95 10 0	50	47 49	51 0 0	1 5 0	Sept. 1874
2048	West Wheal Frances, t, Illogan	28 8 9	2	1½ 2	3 12 6	0 5 0	Oct. 1872
600	West Wheal Seton, c, Camborne†	47 0 0	9	7 9	446 0 0	0 15 0	Apr. 1878
12000	West WyeValley,* l, Montgom	3 0 0	2¼	2¼ 2¾	0 12 0	0 3 0	Nov. 1877
1024	Wh. Eliza Consols t, St. Austell	18 0 0	—	—	19 10 0	1 10 0	Aug. 1878
2048	Wheal Jane, t, Kea	2 13 10	¾	½ ¾	8 5 0	0 5 0	July 1876
4295	Wheal Kitty, t, St. Agnes	5 4 6	1¾	1½ 1¾	11 19 6	0 2 6	Dec. 1874
25300	Wh. Newton, a, c, s, t, Calstock*	1 0 0	—	—	0 8 6	0 4 0	Sept. 1877
80	Wheal Owles, t, St. Just §	161 5 0	25	22½ 25	522 10 0	4 0 0	Aug. 1872
3000	Wheal Peevor, t, Redruth	7 11 0	6¾	5¾ 6¼	0 10 0	0 5 0	Aug. 1878
6000	Wheal Prussia, t, Redruth	0 5 0	—	—	0 4 0	0 1 0	July 1877
10000	Wye Valley, l, Montgomery*	3 0 0	2½	2 2½	0 10 6	0 4 6	Oct. 1876

FOREIGN DIVIDEND MINES.

Shares	Mines.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
35500	Alamillos, l, Spain* †	2 0 0	1½	1 1¾	1 19 3	0 1 0	April 1878
30000	Almada and Tirito Consol., s* †	1 0 0	⅝	¾ ⅝	0 6 3	0 1 0	May 1876
20000	Australian, c, South Australia†	7 7 6	1¾	1¼ 1¾	1 1 6	0 2 0	July 1878
10000	Battle Mountain,* c, (6240 part pd.)	5 0 0	—	—	0 10 0	0 10 0	Nov. 1872
15000	Birdseye Creek, g, California*	4 0 0	¾	½ ¾	0 14 0	0 2 6	June 1874
20000	Cape Copper Mining,* † So. Africa	7 0 0	30 xd	29 30	32 5 0	0 17 6	Sept. 1878
34433	Cedar Creek, g, California*	5 0 0	⅜	⅛ ⅜	0 5 0	0 2 6	June 1873
35000	Cesena Sul. Co., Romanga, Italy*	10 0 0	—	—	0 18 0	0 2 0	Aug. 1878
15000	Chicago, s, Utah*	10 0 0	1¼	¾ 1¼	2 8 0	0 4 0	Nov. 1876
65000	Colorado United, s-l, Colorado* †	5 0 0	3¼	2¾ 3	0 13 6	0 4 0	Jan. 1878
10000	Copiapo, c, Chili* (£20 shares)	16 15 0	—	—	7 11 5	0 3 0	May 1877
100000	Don Pedro North del Rey* †	0 16 0	⅝	⅛ ⅝	2 5 9	0 2 0	Mar. 1875
23500	Eberhardt & Aurora, s, Nevada* †	10 0 0	4¾	4¼ 4¾	1 8 0	0 3 0	Dec. 1877
70000	English & Australian, c† S. Aust.	2 10 0	1¼	1 1¼	2 15 9	0 1 0	Mar. 1877
30000	Flagstaff, s, Utah*	10 0 0	⅜	⅜ ⅜	4 2 0	0 5 0	July 1878
25000	Fortuna, l, Spain* †	2 0 0	4¼	3¼ 4¼	6 19 10	0 5 0	April 1878
55000	Frontino & Bolivia, g, New Grau.* †	2 0 0	2¾	2¼ 2¾	0 2 6	0 1 6	Sept. 1878
30000	Gold Run, hyd.	1 0 0	—	—	0 2 4	0 0 4	Oct. 1872
68000	Kapunda Mining Co. Australia†	1 3 0	—	—	0 2 4	0 0 6	June 1878
20000	Last Chance, s,* Utah	5 0 0	⅞	⅝ ⅞	0 14 0	0 2 0	July 1873
15000	Linares, l, Spain* †	3 0 0	4½	4 4½	17 7 10	0 5 0	April 1878
65000	London and California, g* †	2 0 0	½	¼ ½	0 1 0	0 1 0	July 1878
7837	Lusitanian, Portugal* † (£5 sh.)	3 10 0	—	—	1 11 6	0 1 6	Mar. 1873
5000	Mamm. Copperopolis of Utah, c, s	10 0 0	—	—	0 5 0	0 5 0	Dec. 1875
5000	Mountain Chief, s, Utah*	10 0 0	—	—	0 4 0	0 4 0	Jan. 1873
10000	Pontgibaud, s-l, France†	20 0 0	30	28 30	25 19 11	0 11 11	June 1878
54000	Richmond Consols, s, Nevada* †	5 0 0	10	9¾ 10¼	6 1 6	0 10 0	Aug. 1878
40000	Santa Barbara,* g, Brazil	0 10 0	1⅝	1⅜ 1⅝	0 4 9	0 1 0	April 1878
120000	Scottish Australian Mining Co.* †	1 0 0	2	1¾ 2	15 per cent.		May 1878
86000	Scottish Austral. Mining Co., New	0 10 0	⅞	¾ ⅞	235 per cent.		May 1878
12500	Sierra Buttes, g, California* †	2 0 0	1¾	1¾ 1¾	15 per cent.		May 1878
60000	South Aurora, s, Nevada*	5 0 0	¾	⅛ ¾	1 18 0	0 2 0	Oct. 1877
£253000	St. John del Rey* † (£5 stock & multiples dealt in)		270	280	0 14 2	0 2 0	Nov. 1873
20000	Tolima, g, s* So. America	5 0 0	—	—	½ year. 17½ p. ct. for June		1878
28000	Victoria (London)*, g, Australia	1 0 0	¾	⅝ ¾	0 11 6	0 6 6	May 1874
15000	Western Andes, s,* New Granada	5 0 0	—	—	0 12 6	0 0 7½	Jan. 1878
21000	W. Prussian (5500 pref. sh. 10/. pd)	10 0 0	11	10 10½	0 12 0	0 12 0	July 1876

NON-DIVIDEND FOREIGN MINES.

Shares	Mines.	Paid.	Last Pr.	Clos. Pr.	Last Call.
12000	Argentine, g, Argentine Republic	5 0 0	—	—	Fully pd.
3000	Bellavista, s, Peru* (£10 shares)	10 0 0	—	—	Fully pd.
80000	Blue Tent, hyd., California	5 0 0	—	—	Fully pd.
10000	Buena Ventura,* l, Llano de las Infantas, Spain (£2 sh.)	0 5 0	3	2¾ 3	Fully pd.
49935	Cuentales, g, s, Nicaragua* †	2 0 0	—	—	Oct. 1878
16000	Condes of Chili, s-l	5 0 0	⅝	½ ⅝	Fully pd.
20000	English Australian, g, Victoria*	1 0 0	—	—	Fully pd.
85000	Excelsior Hydraulic Gold Washing Co., California*	6 0 0	⅞	⅝ ⅞	Fully pd.
10000	Exchequer, g, s, California* †	1 0 0	—	—	Dec. 1871
40000	Holcombe Valley, g,* California	1 0 0	⅜	⅛ ⅜	Fully pd.
8000	Hornachos,* s-l, Spain	10 0 0	—	—	Fully pd
12000	Hultafall,* l, bl, Orebro, Sweden	5 0 0	14	13 14	Fully pd.
12000	Hunter Consolidated, s-l, Utah	10 0 0	3½	3 3¼	Fully pd
20000	Imperial Brazilian Collieries, Brazil*	5 0 0	—	—	Fully pd.
100000	I. X. L., g, s, California*	1 0 0	¼	⅛ ¼	Fully pd.
50000	Javali, g, Nicaragua*	2 0 0	9s.	7s. 9s.	Fully pd
3500	La Manche, l, Newfoundland	10 0 0	—	—	Fully pd.
12000	Lanestosa,* l, s, Viscaya, Spain (£2 shares)	1 15 0	—	—	Mar. 1876
75000	Malabar, g, Colombia* (67185 issued)	1 0 0	¼	⅛ ¼	Fully pd.
40000	Malpaso, g, Colombia* (7400 pref. shares, fully paid)	1 0 0	⅜	¼ ⅜	Fully pd.
12000	Menzenberg, c, Honnef, Germany*	5 5 0	—	—	Fully pd.
4588	New Bensberg, i, l, Germany	5 0 0	—	—	Nov. 1876
66000	New Quebrada, c, Venezuela*	5 0 0	1¾	1½ 1¾	Fully pd.
20000	New Zealand Kapanga, g, Coromandel*	1 0 0	¼	⅛ ¼	Fully pd.
3000	Oregon,* g, Oregon, U.S. (preference shares)	4 0 0	2½	2 2¼	Fully pd
50000	Panulcillo, c, Chili* † (£80000 debentures)	4 0 0	1¾	¾ 1¼	Fully pd.
9000	Pestarena United, g, Italy* †	3 0 0	¼	⅛ ¼	Fully pd.
15000	Pitanqui,* g, Brazil (incl. 6000 sh. £1 fully paid)	0 5 0	⅜	¼ ⅜	Aug. 1878
25000	Placerville,* g q, California	2 0 0	2½	2½ 2¾	Fully pd
50000	Providencia and New Rosario, s, Mexico*	1 0 0	—	—	Fully pd.
40000	Ravenscliff, g, New Zealand; c, South Australia	1 0 0	—	—	Fully pd.
5000	Rica, g, Colombia* (40000 issued)	1 0 0	¼	⅛ ¼	Fully pd.
£2,181,000	Rio Tinto,* c, Huelva, Spain	Stock	62	60 61	Fully pd.
100000	Rosza Grande, g, Brazil* † (£1 shares)	1 0 0	⅛	⅛	Fully pd.
30040	Russia Copper, Orenburg and Ufa* †	10 0 0	—	—	Fully pd.
10000	Silver Plume, s, Colorado*	1 0 0	—	—	Fully pd.
80000	Tecoma, s, Utah*	10 0 0	⅝	⅜ ⅝	Fully pd.
43174	United Mexican, s, Mexico* † ‖	29 0 3	3¾	3¼ 4¼	May 1878
14000	Utah, g, s-l, Utah*	5 0 0	—	—	Fully pd.
50000	Virneberg, c Rheinbreitbach, Germany*	2 0 0	—	—	Fully pd.
18000	Yorke Peninsula, c, South Australia	1 0 0	⅛	⅛ ⅛	Fully pd.
40000	Yorke Peninsula, c, South Australia Preference	1 0 0	1	⅜ ⅞	Fully pd.

§ Have made calls since last dividend was paid.

FOREIGN AND MISCELLANEOUS STOCKS, BONDS, LOANS, AND TRUSTS.

	Closing Prices	
Argentine, 1868 6 per cent.	73	74
Bolivia, 6 per cent.	27	28
Brazilian, 1865, 5 per cent.	89	91
Chilian, 1866, 7 per cent.	92	96
City of Providence, 5 p.c. coupon bnds	101	103
Egyptian, Gov. preference	74	74½
Do., unified debt, scrip	56	56¾
Do., 7 per cent., V.M.L.	78	80
Do., per cent. guar.	84	86
Do., K. Daira Sanieh	38	39
Foreign and Col. Gov. Trust, 6 p. ct.	68	73
Do., 5 per cent., 2d issue	60	65
Do., 6 per cent., 3d issue	60	65
Do., 1872, 4th issue	50	55
Do., 1873, 5th issue	55	60
Peruvian, 1870, 6 per cent.	13	13½
Do., 1872, 5 per cent.	11	11¾
Russian, 5½ per cent. L. Mort.		—
Spanish, Quicksilver Mort., 5 p. ct.	97	99
United States Mort. 6 per cent.	99	101

NON-DIVIDEND MINES.

Shares.		Paid.	Last wk.	Clos. pr
40000	Aberdaunant, l, Llanidloes*	1 0 0	¾	⅝ ¾
2560	Aberllyn,* l, bl, Carnarvon	10 0 0	11	10 12
10000	Aberystwith,* s-l, Cardigan	5 0 0	—	—
80	Albion, t, Cornwall	100 0 0	—	—
7800	Alvig. & Burng.,* t, St. Aust.	3 0 0	1¾	1¼ 1¾
13000	Assheton, t, Carnarvonshire*	5 0 0	¾	⅛ ¾
50000	Ballycummisk,* c, Schull	2 0 0	—	—
12000	Bedford Unit.,* c, Tavist. (1l. Hab.)	0 1 0	¼	⅛ ¼
30000	Bettws y-Coed,* l (20,000 issued)	1 0 0	1½	1 1⅜
8000	Blaen Caelan,* l, Cardigan	3 0 0	4¾	4 4¾
3937	Blue Hills, t, c, St. Agnes	3 16 6	¾	⅛ ¾
30000	Bodidris,* l, bl, Denbighshire	1 0 0	1¾	1¼ 1⅜
1000	Bollihope Vale,* s-l, Durham	5 0 0	—	—
200	Botallack, t, c, St. Just]	1 0 0	—	—
5000	Bowden Hill,* mx	1 0 0	1	⅜ 1
4000	Bradwell Moss Rake	2 0 0	3	2 3
10 00	British,* s-l, Wrexham	0 10 0	2¾	2¼ 2¾
256	Browngelly, c, St. Neot	2 0 0	¾	3 3¼
50000	Cambrian,* s-l, c, Cardiganshire	2 0 0	—	—
20000	Central Foxdale, l, 1. of Man* (2l. sh.)	1 5 0	—	—
10000	Central Van,* l, bl, Llanidloes	5 0 0	—	—
5120	Clementina, l, Llanrwst*	1 0 0	1½	1⅛ 1⅜
7500	Combellack,* t, Wendron	2 0 0	—	—
6000	Combmartin, s-l, North Devon	0 7 0	⅛	⅛
24000	Court Grange, s-l, Cardiganshire	1 0 0	1½	1 1⅛
15000	Cwm Brwyno,* l, Cardigan	2 0 0	—	—
15000	Cwm Dwyfor,* c, s-l, Wales	1 0 0	—	—
5000	Ditto, 12½ per cent. pref.	1 0 0	—	—
3000	Cwmystwith (New), Cardiganshire	5 0 0	—	—
1580	D'Eresby Cons., l, bl, Carnarvon	10 0 0	11	9 11
10.4	D'Eresby Mountain, l, bl, Llanrwst	20 0 0	80	40 50
20000	Denbighshire Consolidated, l*	3 0 0	2	1¾ 2
12000	Derwent,* l, Durham	4 0 0	1¾	1½ 1¾
10000	Dubby Syke, l, Durham*	0 15 0	—	—
6144	East Caradon, c, St. Cleer]	2 19 0	½	⅜ ½
4000	East Chiverton, l, Perranzabuloe	7 7 6	1½	1⅜ 1½
3000	East Craven Moor*, l, Pateley Bdge	10 0 0	10	9 10
400	East Goginan, l, Cardigan	2 0 0	—	—
30000	East Roman Gravels,* l, Salop	1 0 0	¼	—
8000	East Van, l, Llanidloes*	5 0 0	3¼	2¾ 3¼
1722	East Wh. Lovell, t, Helston	9 16 0	⅝	¼ ⅝
20000	Elgar,* s-l, Cardiganshire	1 0 0	⅝	⅜ ⅝
10000	Frosterley,* l, Durham	1 0 0	1¼	1⅛ 1¼
3950	Gawton, c, Tavistock	4 5 6	⅜	⅛ ⅜
12000	Glan Clwyd,* l, Gwyddelwern	1 0 0	—	—
14000	Glenroy,* s-l, Isle of Man	4 5 0	¾	⅝ ¾
10000	Glyn,* l, Llanidloes	2 0 0	¾	⅝ ¾
12000	Goginan, & Level Newydd, Card., l	2 10 0	—	—
20000	Goren,* s-l, Carmarthen	1 0 0	1	¾ 1
20000	Gt. E. Foxdale, l, I. of Man (1l. sh)	0 18 0	—	—
12000	Great Holway,* l, Flintshire	5 0 0	5	4½ 5
9500	Great Pant-y-Pydew, l, Holywell	2 0 0	—	—
6000	Gt. Wheal Eleanor, t, North Bovey.	1 17 6	2	1¾ 2
6000	Great Wheal Rodd,* s-l, Cornwall	0 10 0	1	¾ 1
10000	Harehope Gill,* l, Durham (£1 sh.)	0 5 0	—	—
600	Hartington Moor,* carb. l, Derby	1 0 0	2	1½ 2
6400	Harwood,* l, Durham	0 15 0	—	—
6024	Herodsfoot, l, near Liskeard	8 10 0	4½	4 4½
13000	Hingston Down, c, Calstock* †	0 6 0	—	—
5000	Hush Elsteddfod Miners,* l	2 0 0	—	—
2500	Killaloe, sl, Tipperary	1 0 0	—	—
6000	Killifreth, t, Chacewater	2 7 6	1	¾ 1
25000	Kingston Con., s-l, Stoke Climsland.	1 0 0	—	—
	Ditto, preference	1 0 0	1½	1 1⅜
12000	Ladywell,* l, Salop	2 10 0	1	¾ 1
12000	Ditto, 10 per cent. pref., 1l. each	0 10 0	⅝	½ ⅝
5000	Lead Era,* l, Mold	2 10 0	3	2½ 3
2500	Levant, c, t, St. Just	10 4 6	—	—
1400	Lisburne Syndic.,* l, Cardigan.	5 0 0	8	6 8
6000	Livingstone Consols, t, St. Agnes	0 10 0	1	¾ 1
5120	Lovell, t, Wendron	0 16 0	2	1½ 2
25000	Llanrhaiadr, l, Montgomery*	2 0 0	—	—
30000	Llanrwst,* l, Carnarvon	2 0 0	3	2½ 3
24	Mawston,* l, South Wales	50 0 0	65	60 65
8000	Medlyn Moor, t, Wendron	2 9 10	—	—
11000	Melyndwr, l, Cardigan*	3 0 0	1¾	¾ 1¼
7000	Mid Devon Copper*	0 6 8	1¼	1 1¼
21000	Ditto	0 2 6	1	¾ 1
8000	Mineral Corp. of Great Britain*	10 0 0	11	10 11
11000	Monydd Gorddu, l, Cardigan* (Red.)	5 0 0	5	3 5
12000	Morfa Du, z, g, s, Anglesea	0 15 0	⅞	¾ ⅞
25000	Nant-y-Ronen, s-l, Cardigan*	1 0 0	—	—
15000	Nascent Copper*	1 0 0	—	—
4768	New Bronfloyd,* l, Cardigan (5l. sh.)	3 16 0	4½	4¼ 4½
8000	New Dolcoath, t, c, Camborne*	3 0 0	1¾	1¼ 1¾
20000	New East Foxdale, s-l, Isle of Man.	0 18 0	—	—
1492	New Hendra, t, Breage	3 9 0	—	—
3260	New South Merllyn, l, Flint*	2 10 0	⅛	¼ ½
3500	New Tincroft,* t, Lelant	0 0 0	3	2½ 3
5000	New Wheal Emma, c, Buckfastleigh	2 0 0	—	—
4000	North Cornwall,* l, Cornwall	5 0 0	5⅜	5⅛ 5⅜
30000	North Laxey,* l, Isle of Man	1 0 0	4s.	2s. 4s.
2000	North Levant, t, c, St. Just]	12 16 0	1	¾ 1
50000	North Molton, c, mn, i, Devon	1 0 0	1	1
20000	North Prince Patrick,* l, Holywell.	1 0 0	—	—
5936	North Treskerby, c, St. Agnes	5 17 10	—	—
6400	Oola Hills,* s-l, Limerick	5 0 0	—	—
12000	Pandora,* l, Carnarvon	2 0 0	1	¾ 1
6000	Park Valley,* s-l, North Devon	0 4 0	1	¾ 1
6000	Parracombe, s l, Devon	0 5 0	⅝	½ ⅝
16923	Parys Mountain,* c, Anglesea	3 0 0	⅜	¼ ⅜
12000	Phœnix, & W. Phœnix, t, c, Link. §	5 7 3	2	1½ 2
4000	Pateley Bridge, l, Yorkshire	5 0 0	4¼	3¾ 4¼
7000	Picton,* s-l, Holywell, fully paid	1 0 0	5	5
12000	Plynlimmon, l, Llanidloes*	2 0 0	6s.	4s. 6s.
10000	Port Nigel,* s-l, Carnarvonshire	2 0 0	⅛	¾ ⅛
2000	Prideaux Wood, t, Llanivery	5 0 0	—	—
5182	Prince of Wales, c, Calstock]	2 6 0	1s.	6d. 1s.
6000	Relistian Consols, c, Gwinear	0 10 0	⅝	½ ⅝
15000	Rookhope, l, Durham*	1 10 0	¾	½ ⅝
4200	Snowbrook, s-l, Montgomery	5 0 0	—	—
000	So. Cwmystwith, l, Cardiganshire.	2 0 0	3	2½ 3
4000	South Darren, l, Cardigan*	1 10 0	2½	2 2¼
30000	South de Eresby Mountain, l	1 0 0	1¾	1½ 1¾
512	South Dolcoath, c, t, Redruth	2 5 0	—	—
5000	So. Molton Cons., s-l, No. Devon	3 6	—	—
18000	South Roman Gravels, l*	1 10 0	⅜	⅛ ⅜
6000	South Roskear, t, c, Camborne	7 5 0	—	—
6000	South Tolcarne, t, c, Camborne	2 5 6	¼	⅛ ¼
937	South Wheal Crofty, c, Illogan	41 0 10	5	4 5
6000	St. Lawrence, Amal., l, Flintshire*	2 0 0	—	—
10000	St. Patrick, l, Halkin, Holywell*	1 0 0	1¼	1 1¼
6000	Success, &c., l, Derb. (12,000l. called)	1 0 0	—	—
16000	Sunnyside,* l, Durham	2 0 0	—	—
30000	Talybont, s-l, Cardiganshire	1 0 0	1¼	1 1¼
6400	Teesdale,* l, Durham	1 0 0	⅛	⅜ ⅛
14000	Teign Valley, l, bar., Bridford	1 0 0	—	—
10000	Temple, l, Cardigan*	1 0 0	—	—
10000	Tolgus Consols,* c, Redruth	5 0 0	3¼	3¼ 3¼
8000	Treleigh Wood, t, Redruth	6 1 0	—	—
12000	Trethellan, s-l, Crantock*	2 0 0	—	—
640	Truro*, l, Nerquis, Flintshire	10 0 0	—	—
10000	Tyn-y-Fron,* l, Cardigan	1 0 0	1½	1⅜ 1⅝
1000	Vaughan*, l., Cardiganshire	10 0 0	—	—
18000	Victor,* l, Flintshire (£1 share)	0 5 0	—	—
12000	West Assheton, l, Carnarvon	1 0 0	⅜	⅛ ⅜
6000	West Basset, c, Illogan]	6 13 4	⅜	⅜ ⅜
8500	West Combmartin, s-l, North Devon	1 0 0	—	—
7000	Ditto	0 2 6	—	—
3000	W. Craven Moor, l, Pateley Bridge*	10 0 0	10	9 10
5000	West Godolphin, t, c, Breage	2 16 0	1¼	1 1¼
12000	West Goginan,* Cardiganshire	2 0 0	⅜	⅛ ⅜
10000	West Llangynog, s-l, Montgomery	2 0 0	—	—
3000	West Mary Ann, l, Menheniot	0 12 6	¾	½ ¾
53000	West Milwr, s-l, Flint	1 0 0	—	—
5000	West of England Granite Company.	2 0 0	—	—
20000	West Pateley Bridge, l, Yorkshire	1 0 0	2¼	1¼ 2¼
1000	West Roskear, t, s-l, bl, c, Camborne.	5 10 0	—	—
10000	West Vor,* t, c, ars, Breage	1 0 0	—	—
3000	West Wheal Peevor, t, Redruth	0 10 0	—	—
6000	Wheal Agar, c, Illogan	12 0 0	4	3¼ 4
512	Wheal Basset, c, Illogan]	28 2 6	3	2 3
6000	Wheal Coates, t, St. Agnes	2 0 0	—	—
2635	Wheal Comfort, c, Gwennap	1 7 0	—	—
6000	Wheal Crebor, c, Tavistock	4 3 0	1	½ 1
5179	Wheal Grenville, c, Camborne	4 1 6	2	1½ 2
12000	Wh. Mary Hutchings,* t,